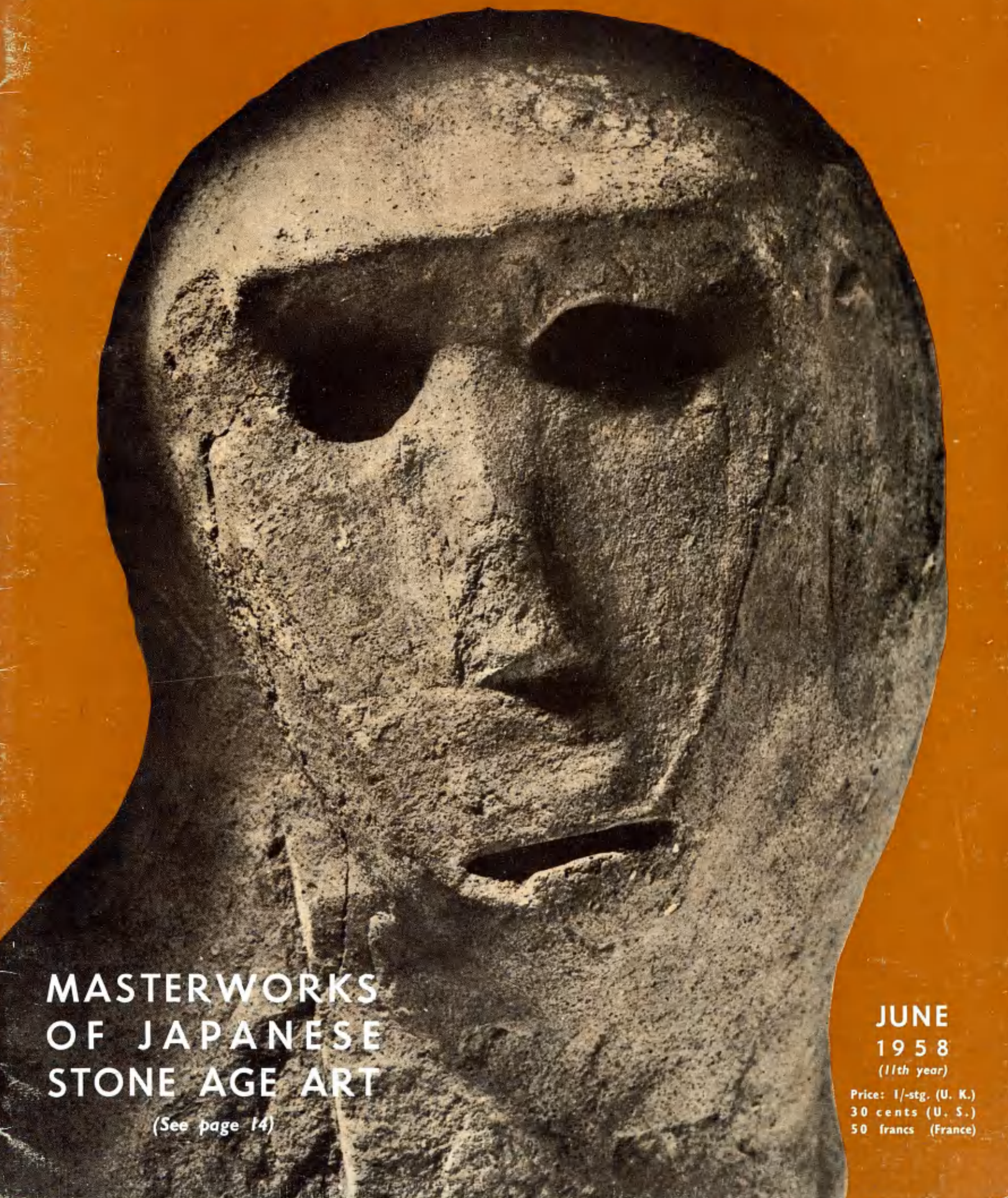
A WINDOW OPEN ON THE WORLD

The UNESCO Courier



MASTERWORKS OF JAPANESE STONE AGE ART

(See page 14)

JUNE
1958
(11th year)
Price: 1/-stg. (U. K.)
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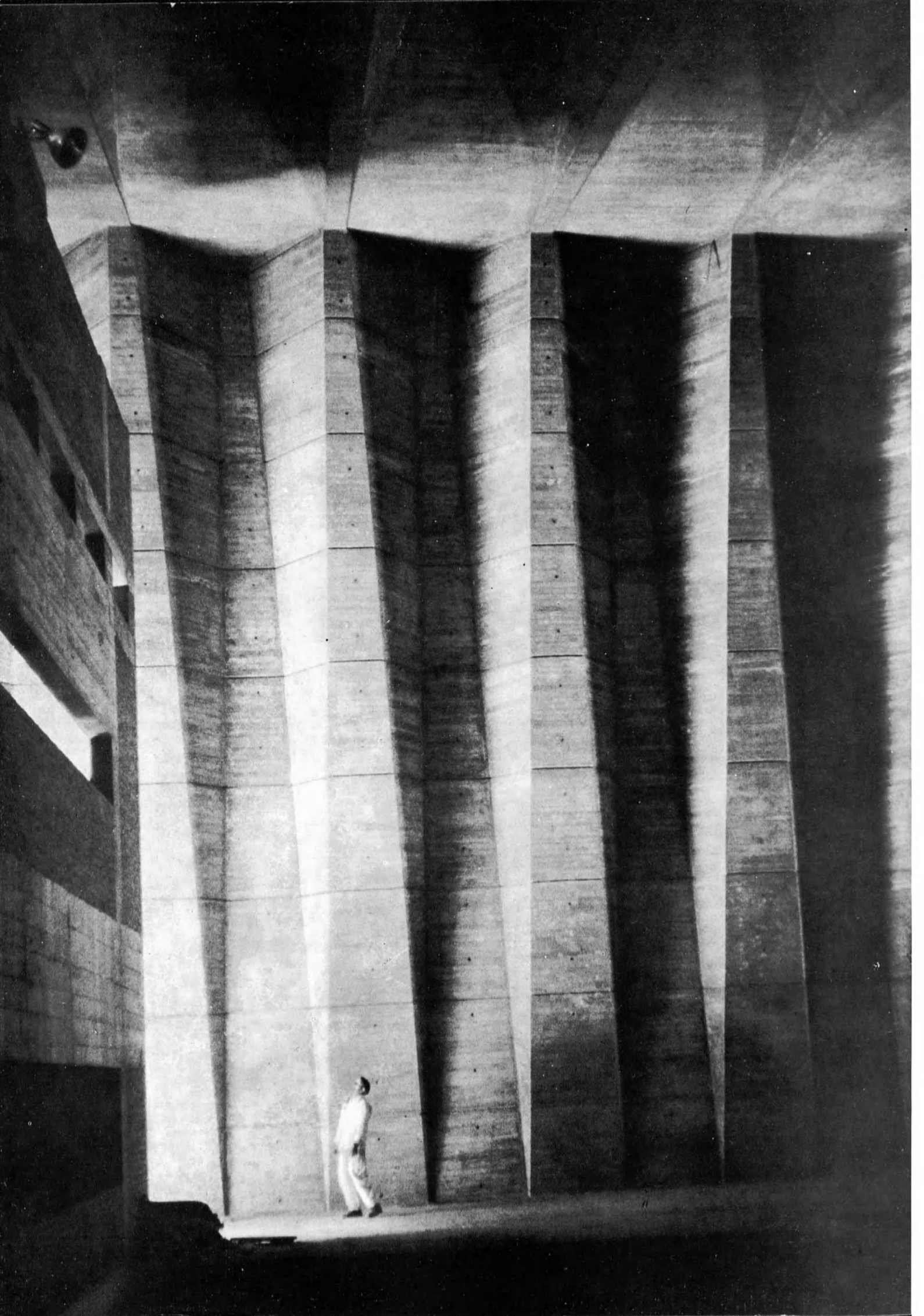
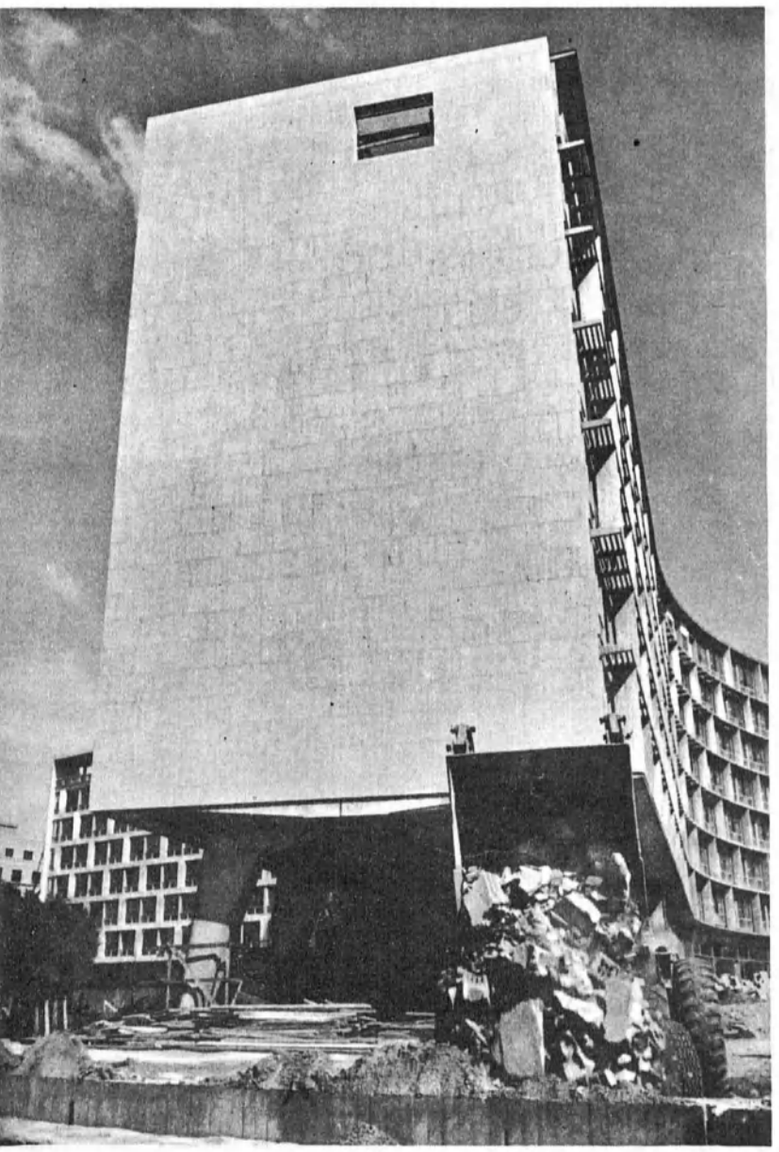
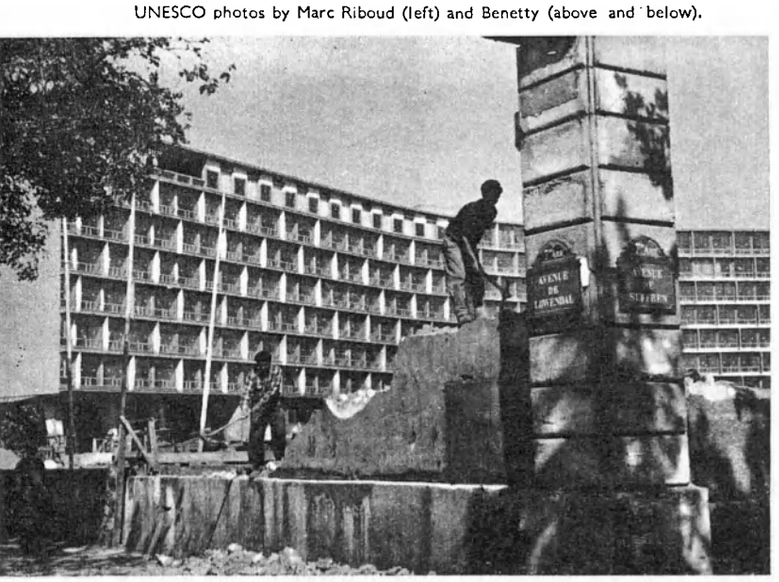




UNESCO'S NEW HOME will be opened to the public later this year, and during the course of the next few weeks the large-scale operation of moving in the Secretariat will begin. Late this year the Unesco Courier will devote a special issue to the new Unesco House which, while still under construction, has become one of the best known modern buildings in the world, and to the works of art which decorate it. Photos show: Left, an interior view of Conference Building with its massive fluted walls in reinforced concrete; above, end view of a wing of Y-shaped Secretariat Building; below, the old makes way for the new as workmen demolish the last traces of a building which formerly occupied the site.

UNESCO photos by Marc Riboud (left) and Benetty (above and below).



A WINDOW OPEN ON THE WORLD

The UNESCO Courier

JUNE 1958 No. 6

11TH YEAR

COVER PHOTO

Monkey modelled in clay is one of the remarkable sculptural figures which were placed in hundreds around the great burial mounds of Japan almost two thousand years ago. For story on Stone Age Japanese Art see p. 14.

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CELEBRATION IN CUZCO

Old Inca capital restores its 'quake-torn monuments

INCA CEREMONY is re-enacted (right) by people of Cuzco, Peru, wearing costumes of their ancestors. Most solemn feast of ancient Incas was that dedicated to the Sun, which was attended by nobles from every corner of their vast empire. In the Cuzco of today the walls of Inca palaces and temples (below) serve as foundations of Hispanic convents, churches and mansions. Magnificent green and grey blocks of Inca stonework with beautifully worked surfaces were fitted together without mortar.

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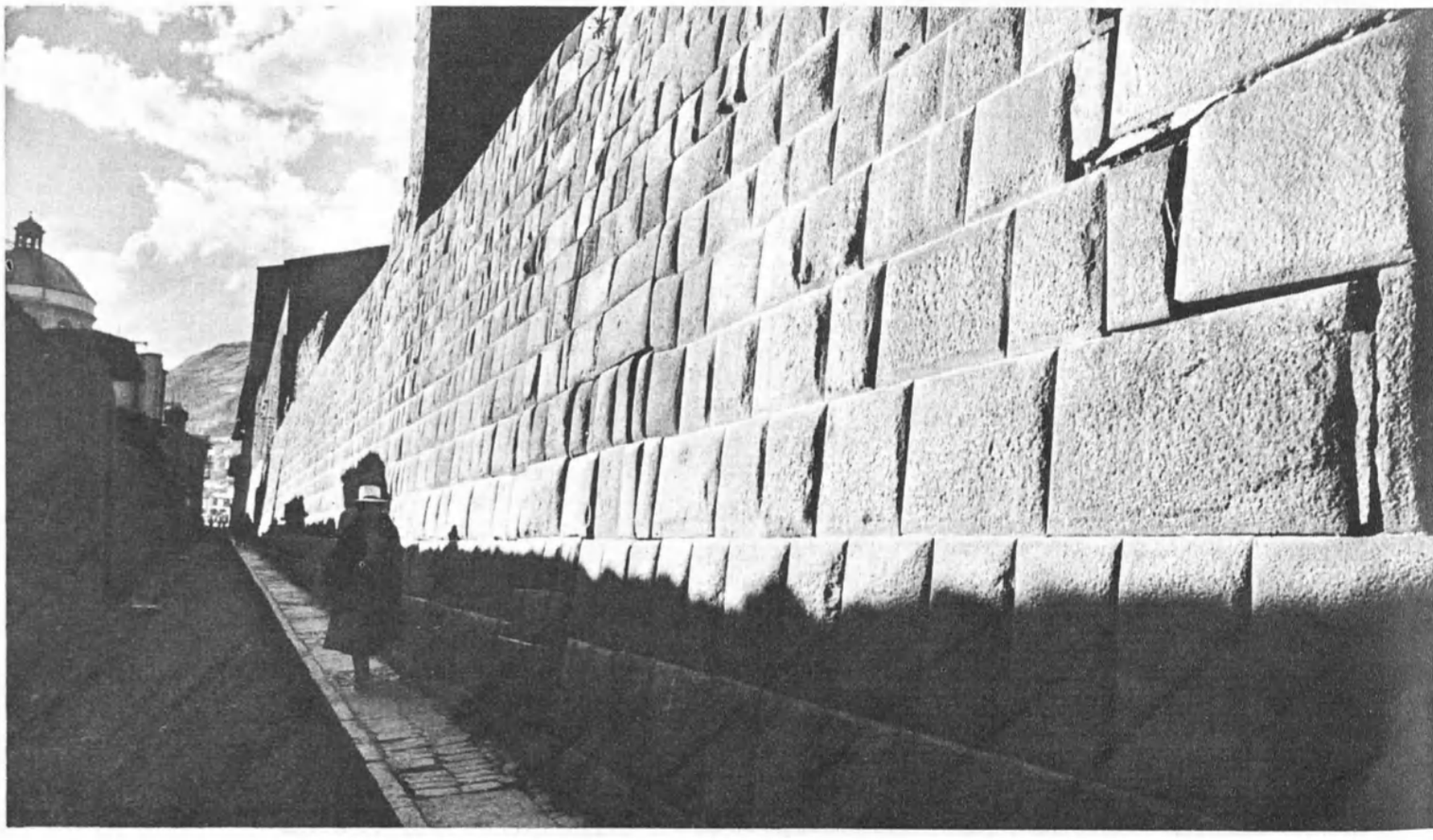

SHAPED like an open hand, the Peruvian city of Cuzco spreads out at the head of a strategic valley. The fingers reach up towards steep hillsides, the base of the hand lies at the confluence of three small rivers. The city's site has been inhabited since a remote antiquity from the very earliest urban civilization of the central Andes. During the 15th century, Cuzco was the capital of the Incas—"The People of the Sun"—whose empire was the most extensive of any in ancient America.

Cuzco is in reality three cities. One is Inca, the second is Colonial and the third is modern. Inca Cuzco lies at ground level and beneath the Colonial city. It consists of massive, beautifully fashioned walls. Colonial Cuzco overlies it with religious buildings and courtyard dwellings. Modern Cuzco, to a great extent, has still to take form for it lacks many of the buildings required by a large regional capital.

Eight years ago, on the afternoon of Sunday, May 21, 1950, Cuzco rocked and trembled in the grip of a major earthquake. Within six seconds 300 people were killed or injured, 3,000 dwellings were destroyed and damage was done to many churches, including the 17th century Cathedral, to the university, to historic Colonial mansions and other monuments. All told, damage was estimated at 500 million soles (33 million U.S. dollars in 1951).

The Peruvian Government took immediate steps to meet the appalling situation in the city. It instituted a new tobacco tax to help pay for Cuzco's public and private housing reconstruction, and the Peruvian Congress made a special appropriation for the restoration of churches and historical monuments. The Government also asked UNESCO to send a special mission to study the situation in Cuzco and to make suggestions for conservation and restoration.

Headed by Professor George Kubler, of Yale University, U.S.A., and including Luis MacGregor Ceballos, a Mexican architect-restorer and Oscar Ladron de Guevara, a Peruvian architect-archaeologist, the mission went to Peru in June 1951. Its report (later published by UNESCO: *Cuzco: Reconstruction of the Town and Restoration of its Monuments* (1) included a survey of the earthquake damage and a plan for preserving and restoring the damaged buildings.

When, in 1956, Professor Kubler again visited Cuzco on UNESCO's behalf he was able to report that "the achievement of rebuilding and restoring nearly three-quarters of the monumental architecture of the city in five years... remains impressive."

Today, Peruvian architects and engineers have rebuilt most of the city's damaged churches and cloisters, consolidated shaky structures and repaired the stone surfaces. In addition hundreds of new dwellings have been constructed for homeless families, a courthouse has been erected and improved public services, such as electric power supplies, have been put into operation.

As the people of Cuzco—masons, artisans and labourers—rebuild their city it seems as though history is repeating itself. In 1650, almost exactly three centuries before the recent catastrophe, another great earthquake left Cuzco in ruins. But the city recovered from this disaster and went on to experience its great Colonial florescence between 1650 and 1780. Between 1930 and 1950 the population of Cuzco grew from 20,000 to 80,000. The creation of a Cuzco Development Authority with United Nations participation, aiming at an intensive programme of rural and urban improvements, gives hope that this rate of growth will continue until Cuzco ranks among the largest cities of Peru, with a population of at least 150,000.

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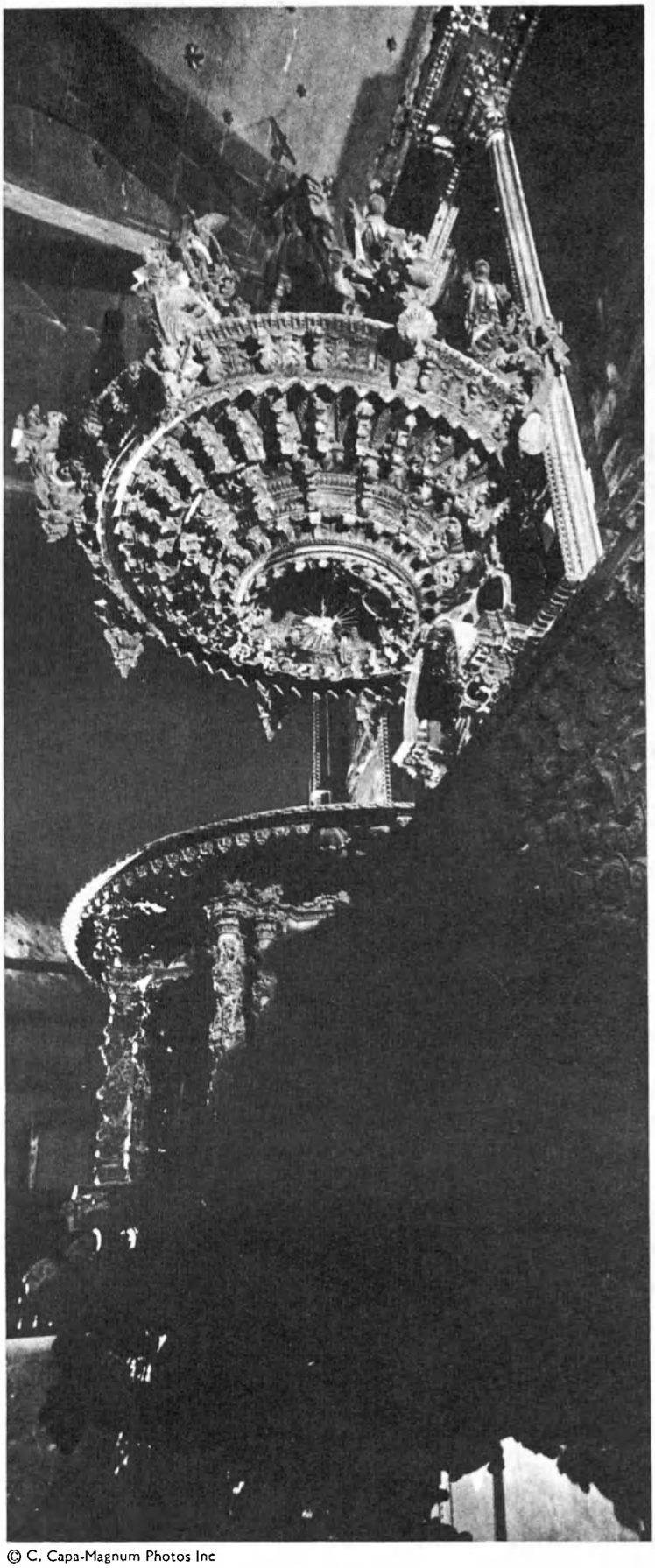
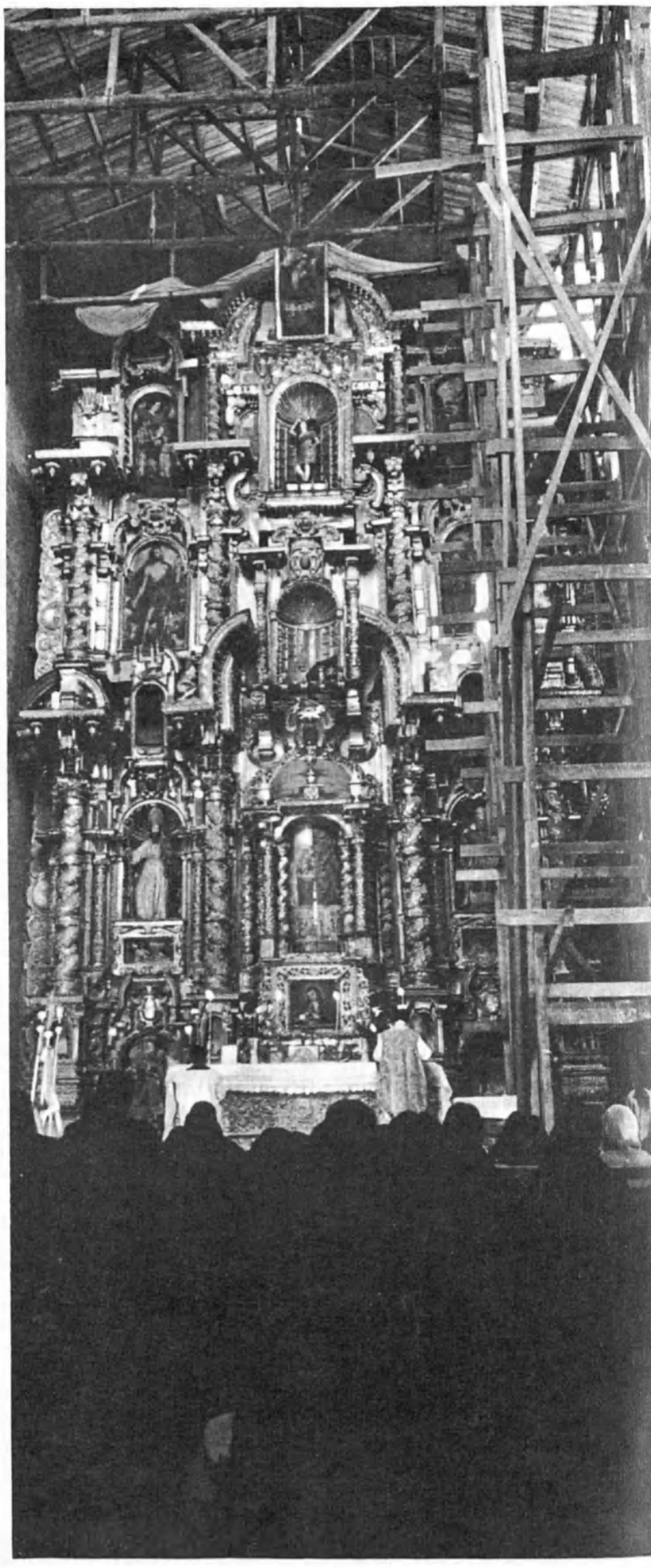
(1) No. 3 of Unesco's "Museums and Monuments" series. Price $1.50; 5/6; 400 frs.





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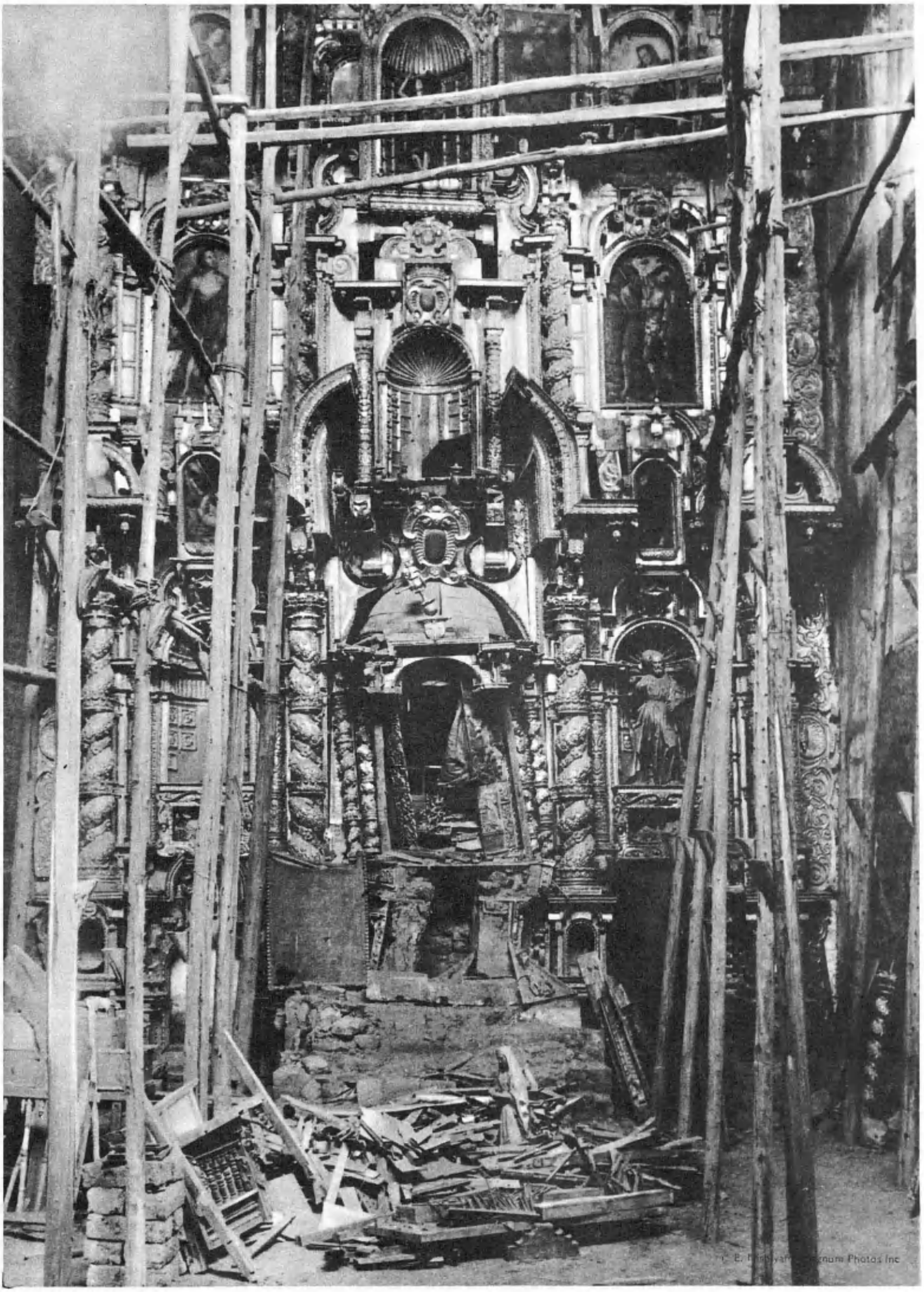
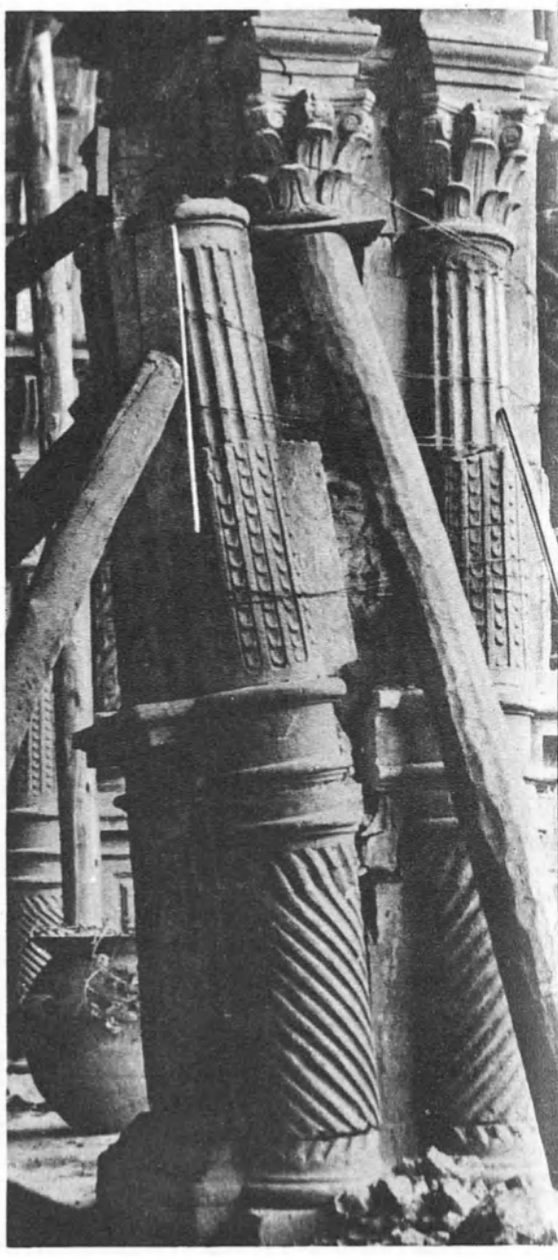
ORNATE DECORATIONS in the churches of Cuzco include what is probably the best collection of mid-seventeenth century wood sculpture in Peru. Above, left, lavishly carved wooden pulpit in Church of San Blas. It is said that no country in South America can equal Peru in the number and quality of wood-carved pulpits and in the variety of types and styles. Above, right, congregation attends Mass in church of San Sebastian, in the suburbs of Cuzco, which was severely damaged by the 1950 earthquake. Opposite page, high altar of the same church before damage caused by falling stones was repaired.





G. de Reparez-Unesco

CITY OF STURDY BROWN STONE

The fine brown Andean stone, called Andesite, with its slight, reddish cast which the Incas and later the Spaniards used to build Cuzco, gives the city a uniformity like Florence with its palaces of the Renaissance. Cuzco is a city of sturdy stone which abounds in all of its churches, cloisters, arcaded plazas and in the portals and patios of its houses. Right, roof-top view of Cuzco, 11,000 feet up in the Andes. One of the city's architectural gems is the main cloister of La Merced, a monastery which was entirely rebuilt after an earthquake destroyed Cuzco in 1650. Above, cloister pillars shored up after the 1950 earthquake. Left, pillars after restoration.

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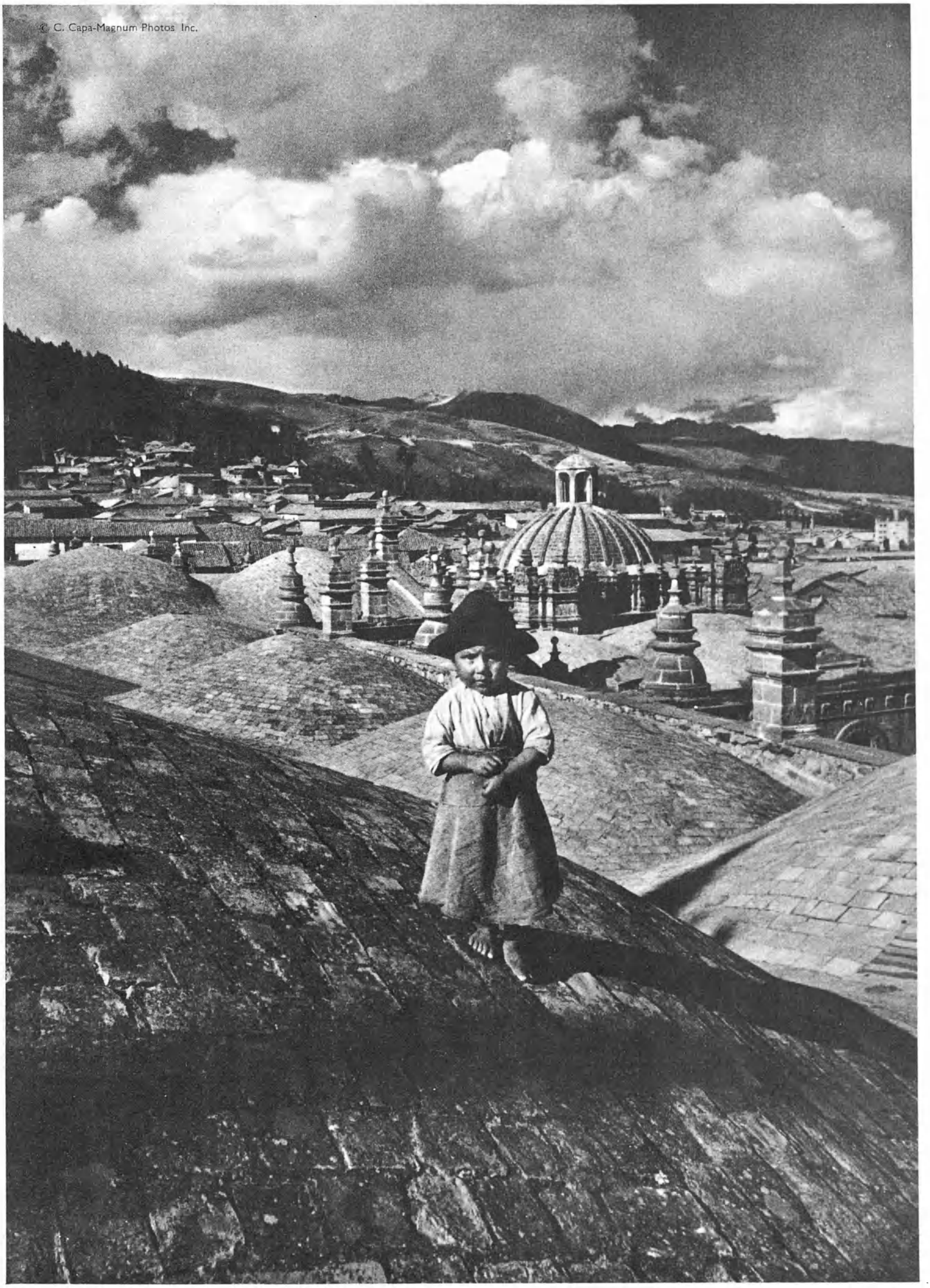
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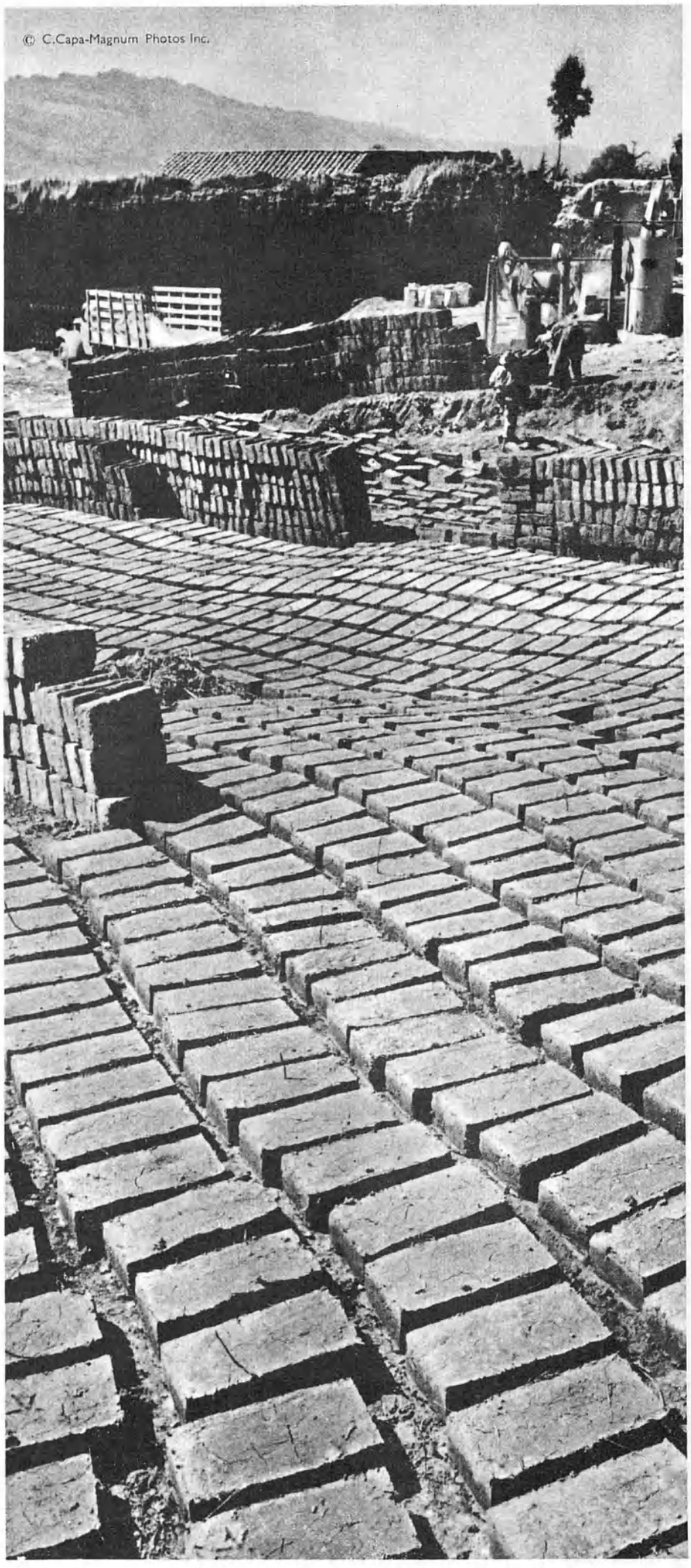

GREAT MAKERS OF BRICKS AND GROWERS OF FOOD

Innumerable sun-dried clay bricks (left) have been used in Cuzco to rebuild the houses destroyed by the earthquake. Traditional building material—the clays of Cuzco are inexhaustible—these bricks are toughened by chopped straw and formed by hand in a simple wooden mould. Below, old woodworker, Juan Estrada, puts finishing touches to the bases of two carved wooden columns. All wooden sculptures and carvings in Cuzco's reconstruction have been executed by local craftsmen. Right, hustle and bustle of Cuzco market, little changed since the days of the Inca Empire, which was based on intensive agriculture, including cultivation of more than 40 domesticated plants. Markets were therefore an important feature of Inca life, and it was decreed that there should be three fairs every month, when labourers in the field should come to the market and hear anything the Inca or his Council might have ordained.

Unesco-Eric Schwab

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THE ROOTS OF PREJUDICE

by Arnold M. Rose

With this issue, THE UNESCO COURIER begins the presentation in serial form of *The Roots of Prejudice*, by Arnold Rose, Professor of Sociology at the University of Minnesota, U.S.A. Published by Unesco in its series *The Race Question in Modern Science, The Roots of Prejudice* is one of Unesco's most popular and provoking studies. It can be obtained from Unesco's National Distributors (see list, page 35), price: 30 cents ; 1/6 ; 100 fr. In this first article, Professor Rose discusses personal advantage as one of the important causes of prejudice. In future issues he will show how ignorance of other groups of people and racism, or the "superiority complex" are the profound roots of prejudice. Professor Rose will also deal with the important problems of transmission of prejudice to children, the psychology of prejudice and prejudice as a warping of the personality.

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PREJUDICE of one group of people against another group has existed in most parts of the world and at all periods of history. It has not been universal, in the sense that all cultures or all people have displayed it; but it has been prevalent enough to serve as a basis for conflict between nations and between groups within a nation. It practically always involves discrimination, which means mistreatment of people without their having done anything to merit such mistreatment (1). It has thus been a source of human unhappiness and misunderstanding wherever and whenever it has arisen. Although certain individuals have exploited prejudice to gain political power or economic advantage for themselves, there is no example of a whole people advancing themselves or their civilization on the basis of it. It has been, rather, a blight from almost every standpoint.

Yet there is still relatively little understanding of the causes or even of the effects of prejudice, except on the superficial, obvious level. It has not even been studied by scientists sufficiently to make them certain of its causes, although there have been some startling discoveries and stimulating suggestions. Outside the ranks of social science, most people hold quite erroneous ideas about it—ideas which themselves are sometimes born of prejudice and which are sometimes even detrimental to those holding them. We shall now proceed to consider the varied sources of prejudice, moving from the more obvious and rational causes to the less apparent and unconscious ones.

(1) *We use the term prejudice to refer to a set of attitudes which causes, supports or justifies discrimination. Since discrimination itself consists of observable behaviour, it is a more useful subject for study. But since in this study, we are searching for causes of behaviour, we must direct our attention to the mind of the person who practises discrimination. Prejudice is taken as the mental state corresponding to the practice of discrimination.*

Excuse for economic or political exploitation

PERHAPS the most obvious cause of prejudice is that it creates advantages and material benefits for those who are prejudiced. Prejudice can provide an excuse or rationalization for economic exploitation or political domination. It can enable a man to justify to himself acts that he would ordinarily be unwilling to engage in. It can be exploited by shrewd, self-seeking manipulators when it occurs in other people. It can offer opportunities for taking sexual advantage of minority group women, and it may give people at the bottom of the social ladder an apparent superiority over the minority group. The fact that individuals and groups can and do gain advantages for themselves out of prejudice, becomes a cause of prejudice.

Imperialism has frequently been attended by prejudice. Even when there has been no noteworthy

development of prejudice in the home country, those who go forth as colonial administrators, traders, or extractors of the natural resources of undeveloped lands learn that callousness toward subject peoples, and an attitude of racial superiority will aid them in their venture. Within limits, a harsh manner and exacting demands will gain a large output from workers who have no means of defence or retaliation. Payment of low wages and provision of only a minimum of life needs to these workers will mean larger profits.

Maxim for dictators : divide and conquer

RACIAL, national, or religious antagonisms can be built up to deflect class antagonisms. A relatively small number of exploiters can maintain their dominant position by dividing their subordinates and encouraging them to be hostile to one another. One group may be given the sergeant's role of keeping all other groups in line by force. In return for this they have the satisfaction of being regarded as belonging to the superior group, even though they are themselves exploited. This procedure may be used in a perfectly "natural" way, so that it is obvious to no one.

Techniques akin to those of imperialism may be employed *within* an independent nation. Prices or rents of houses can be kept at a high level by obliging people to live within certain small, segregated areas. Wages can be kept low for people who are not allowed to work in any but certain exploited jobs. Public facilities and benefits may be kept at a minimum for people who are segregated to the greatest extent.

It is difficult to tell how much of this use of prejudice and discrimination for purposes of exploitation is conscious and how much unconscious. Some that appears unplanned and unconscious is occasionally revealed to be quite deliberate. One young man who had just answered a questionnaire designed to test for anti-Semitism made a revealing remark in this connexion. He said, "I have no strong feelings about Jews either way" (the test did not show him to be anti-Semitic). "But I am studying to be a banker, and if my employers are anti-Semitic, I'm going to be anti-Semitic too, as I want to get ahead."

Perhaps we shall never discover for certain how much of prejudice is deliberate and how much unconscious. But that is of little consequence, as the effects and the underlying causes are always the same. Deliberate use of prejudice to exploit a group of people is hardly different from the unplanned and non-directed utilization of group differences to gain every possible advantage from the situation. Both can be considered together as a cause of prejudice.

The gains to be secured may be political as well as economic. Group differences can be fostered to keep a certain party in political power. Modern dictators have been experts in the technique of "divide and conquer" both to retain power in their own country and to extend their conquests abroad. Studies have been conducted in several countries which show how Hitler secured supporters—now called fifth columnists —by offering them the positions and property then held by Jews and by appealing to a latent feeling of racial superiority. In democratic countries where prejudice is prevalent, some politicians successfully base their campaign for office on theories of racial supremacy. Most of the organizations formed for the apparent purpose of fostering race hatred have been shown to have political domination as their ultimate aim.

Economic or political exploitation as a cause of prejudice has definite limitations. In the first place, it must be balanced against the costs of prejudice. It is probable that in the long run imperialistic countries could have gained even greater economic advantages if they had not employed prejudice, discrimination and violence. Individuals who exploit prejudice become extreme victims of the psychological costs of prejudice. Another burden they lay upon themselves is the realization that they are exploiting and cheating. Most people dislike thinking of themselves as unfair and dishonest, or without ideals. Even the building up of a psychological defence to rationalize unfairness and dishonesty may be only partially successful; it certainly creates rigidities in the personality. Thus, the advantages of prejudice do not seem great when balanced against its cost. Moreover, there are progressively fewer opportunities for exploitation through prejudice as hitherto subordinated peoples have now organized themselves to stop it.

Throughout the world imperialism is in retreat

THROUGHOUT the world, imperialism is retreating. Exploited minority groups within nations have also made great strides towards improving their position and reducing victimization. They have had active support from many members of the majority group who have realized the costs and dangers of prejudice. Thus, exploitation and domination are decreasing, at least in so far as they stem from prejudice, and they are thus less effective as causes of prejudice.

There are other apparent advantages of prejudice. We can only refer briefly to the difficult subject of men of the dominant group taking sexual advantage of minority group women. "Gains" of this sort are obviously balanced by social losses for the dominant group as a whole. A society in which there are frequent demands for casual and loveless sexual intercourse is not a well-organized or satisfying society, either to its men or to its women.

Finally there are some prestige gains in a society based on prejudice. If people have no other basis of prestige, they get a certain satisfaction simply out of being members of the dominant group. Although they are at the bottom of their own racial, national, or religious group, they can feel superior to the minority groups.

The weakness of this kind of gain is surely obvious : the prejudiced person who gains a prestige satisfaction out of feeling superior to a minority group is diverted from other, more important, kinds of prestige satisfaction. He loses ambition, and allows himself to be manipulated by those higher on the prestige scale in his own dominant group. People who live under such unfavourable circumstances that they might be expected to join reform or revolutionary movements are sometimes kept from doing so by reluctance to lose the trivial prestige that raises them above the minority group.

(To be continued next month)

Masterworks of Japan's Stone Age Art

by Seiroku Noma

THE history of Japanese art stretches far back into the mists of antiquity—possibly some 6,000 years. To most of these six millenia—from the time when the earliest inhabitants settled in the Japanese islands, between 4,000 and 6,000 years ago, to the dawn of Buddhism, which was introduced in 552 A.D.—the Japanese have given the name *Joko Jidai* (The Ancient Age).

There is no historical record of this period since there was no system of writing, but archaeological studies have reconstructed for us an image of the early Japanese people and their way of life in the Stone Age.

These men were hunters and fishermen. They gathered wild fruits and shellfish and used stone tools and implements. Their era is known as the Period of *Jomon* (rope-pattern) Type Pottery Culture as their civilization is represented by crude earthenware with surface decorations of impressed patterns like those produced by pressing the clay with rice-straw rope or matting. The people lived in primitive houses which were no more than pits dug in the ground (hence known as pit-houses) with hearths in the centre and tent-like roofs. Excavations from the remains of their dwelling places have produced not only pottery but flint arrowheads, hatchets and *dogu* (clay images).

These clay figurines or human figures of the Stone Age are the oldest existing works of sculptural art in Japan and together with the later Haniwa figures form the two characteristic kinds of sculpture of Japan's pre-Buddhistic period.

Just as the human fœtus at first presents a grotesque shape, so is the embryo of sculpture always bizarre, and the clay figurines of early Stone Age Japan, with their squat bodies and flattened heads, are no exception to this rule. Most of them are about fifteen or twenty centimetres in height, though there are some as small as five and others as large as thirty centimetres high. They have been found in the centre and north of Japan.

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How old is this sculpture? Until recent times archaeologists have been reluctant to make precise assertions. Of the 200 or so clay figurines so far discovered, most appear to date from the Middle or Late Jomon Period.

Recent radio-carbon tests for dating ancient objects now enable archaeologists to divide the Jomon Culture into five periods, the first beginning roughly 5,000 years before the Christian Era and the fifth and last period ending towards the first or second century B.C. (1).

The distribution of these clay figures shows that they began to be made in the Middle Jomon Period and became conventionalized as they came to be more fashionable. Later treatment of exaggeration and ornateness was probably an attempt to break through the conventionalism.

Why did these ancient people make such figurines? Like the many primitive clay figurines of similar fantastic shapes which have been excavated in Central Europe and Siberia, many of the Japanese figurines represent pregnant women with swollen breasts and bellies. It is therefore presumed that men prayed to these symbols of fertility that their families might multiply and prosper. The fact that there were figures other than those of pregnant women is not hard to explain. Once man has learned to make a figure as an object of prayers, he can go on to make figures symbolizing other wishes and desires.

The clay figurines then were a kind of icon, but most likely they were not for community use, but were worshipped in houses by individual families, for they have generally been found in groups numbering several scores. Their small size (mostly about 15 cm. high) suggests that they were kept in the "pit-houses", and they must have been hung, for they are unstable in shape and some have perforations on the shoulders.

★

THE expression of these figurines is strong and vigorous. They were made by the same craftsmen who produced the Jomon Type Pottery and who possessed a fine formative talent rarely found among primitive men. Their earthenware pieces, which were food vessels for daily use, were also ornaments to enrich their lives, and these reveal most strongly the pleasure and pride the makers took in producing them. While the Jomon Pottery pieces were utilities of daily life, the clay figurines were made on rare occasions.

Following the clay figurines in ancient Japanese sculpture come the Haniwa, quite different from the figurines in age and location. Produced in about the third and fourth centuries A.D., these belong to a different culture. The term Haniwa means *wa* (circle) of *hani* (clay), that is, clay objects arranged in a circle or circles. They are so called because they were set up in a circle or concentric circles on the slopes of burial mounds which began to be built in Japan in about the third century A.D., a custom which continued until the second half of the sixth century when the introduction of Buddhism brought the cremation system.

The Haniwa or terra-cotta tomb figures or posts can be classified into two groups: (1) those in the shape of simple cylinders placed around a mound to border the tomb compounds or along the foot of the mound to prevent the earth crumbling down; (2) those in the shape of men, animals, houses, furniture and other objects dedicated to the persons buried there. While clay figurines are found in Japan's eastern regions, Haniwa are discovered chiefly in the west, although some have also been unearthed (like the clay figurines) in the Kanto District. But in all cases they have been excavated from ancient burial mounds which shows their purpose was different from the clay figurines.

There is an old legend relating to the origin of Haniwa recorded in the *Nihon Shoki* (Japan Chronicle) a book of Japanese history completed on Imperial order in the year 720. This records that when a prominent person died it was customary in Japan for his or her servants to be buried alive in the same tomb. However, on the death of the Empress Hihasuhime-no-mikoto, consort of the Emperor Suinin (c. 3rd century), the benevolent Emperor had pity on her followers and asked his advisers how this cruel custom might be replaced. The solution was found by the courtier Nomi-no-sukune

Cont'd on page 20

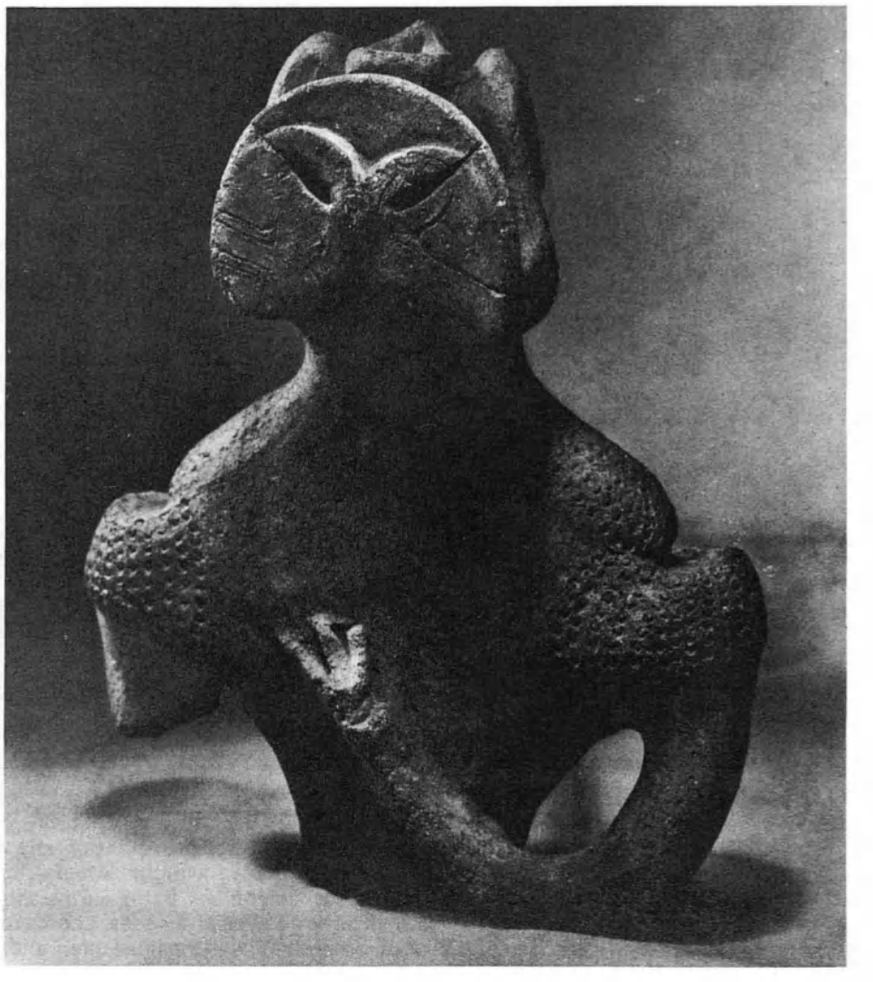
(1) See *La Culture Préhistorique du Japon* by Yukio Kobayaschi, in the *Journal of World History*, Vol. IV, N° 1, 1957, a quarterly review published under UNESCO's auspices.

DANCERS IN THE MOONLIGHT. Arranged in circles around the burial mounds which began to be erected in Japan in the 3rd century A.D., archaeologists have found clay sculpture in the form of human figures, animals and objects. Named "Haniwa" from *wa* (a circle) and *hani* (clay) this ancient sculpture has chiefly come to light in western Japan. Largest in number among the Haniwa figures are men and women, some in armour, others dancing and singing. Those shown here are Haniwa dancers, the larger one (thought to represent a woman) being 18 in. high and the smaller (a man) 11 in.. Tops of these cylindrical figures are modelled into faces with large eyes and noses, and despite their simplicity the figures have a lively, joyous air. Looking at them, says Seiroku Noma, one might well imagine men and women of antiquity dancing in some moonlit field.

SCULPTURE BY JAPAN'S FIRST CRAFTSMEN

This clay figurine, dating from the Stone Age, is an example of the oldest existing sculptural works of art found in Japan. These are presumed to date from the early part of the Neolithic Age in Japan during what is called the Period of Jomon Pottery. The name "Jomon" means "rope pattern," as the crude earthenware of this period has surface decorations of impressed patterns like those produced by pressing the clay with rice-straw or matting. Figurine shown here, which lacks the right arm and the lower part of the body, dates from the Middle Jomon Period (between 2000 and 3000 B. C.) With the exception of the shoulders, which are black, it is coloured brown. Its present size of 10 in. shows that the complete work was larger than the average among such figurines.

One of the "hill-shaped" figurines, so called because their heads are shaped like gently sloping hills. They have broad, raised shoulders and stout legs and wear waistcloths resembling tight shorts. Figures of this type are believed to date from the Late Jomon Period, (about 1000 B. C.) as they have been unearthed along with earthenware pieces identified as belonging to this period. Jomon Period figurines have chiefly been found in the central and northern parts of Japan.



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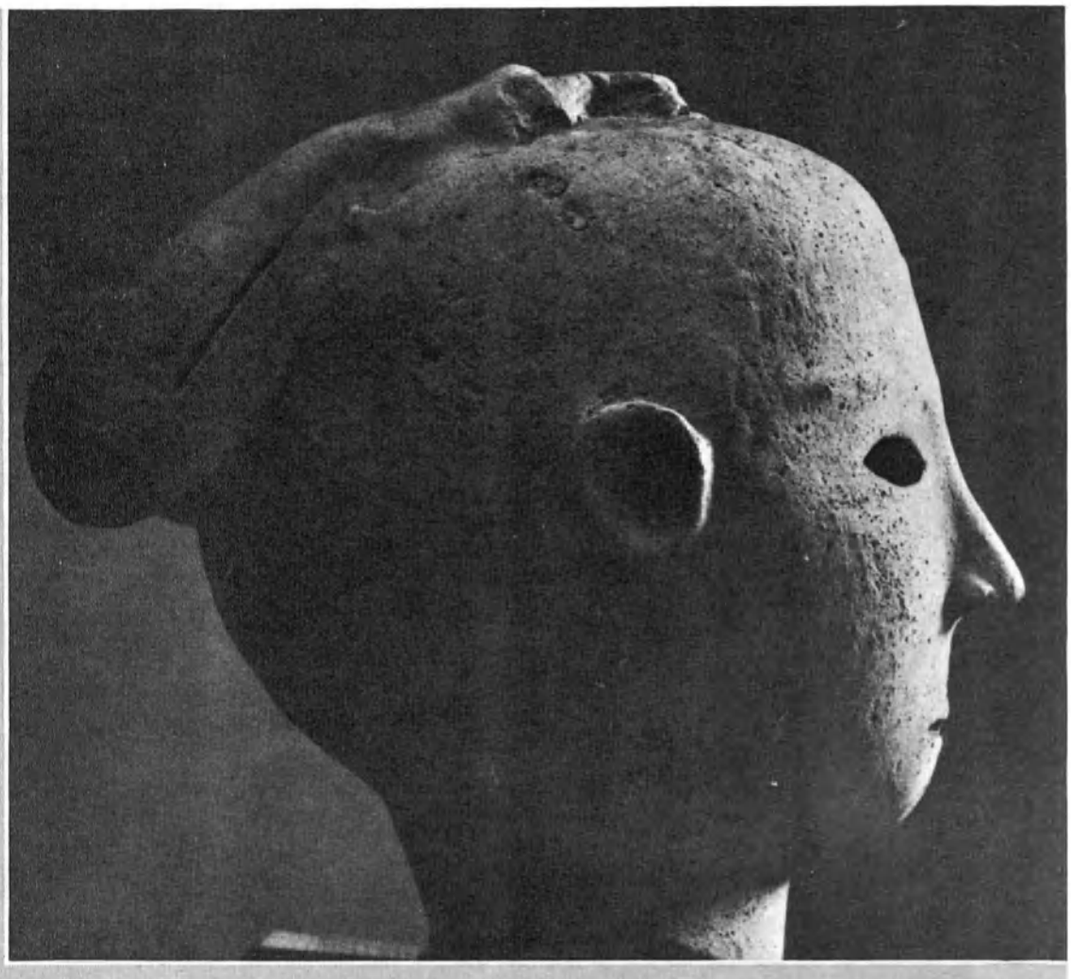
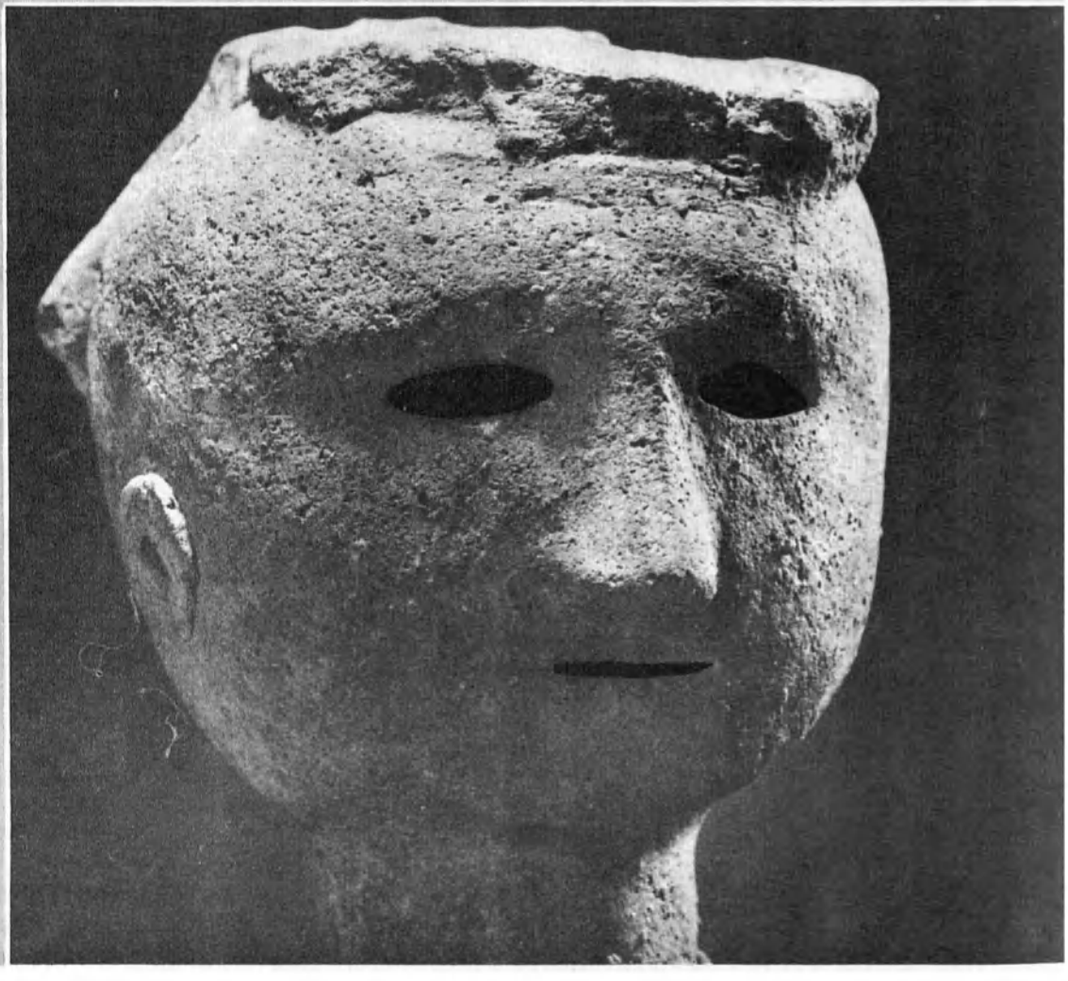
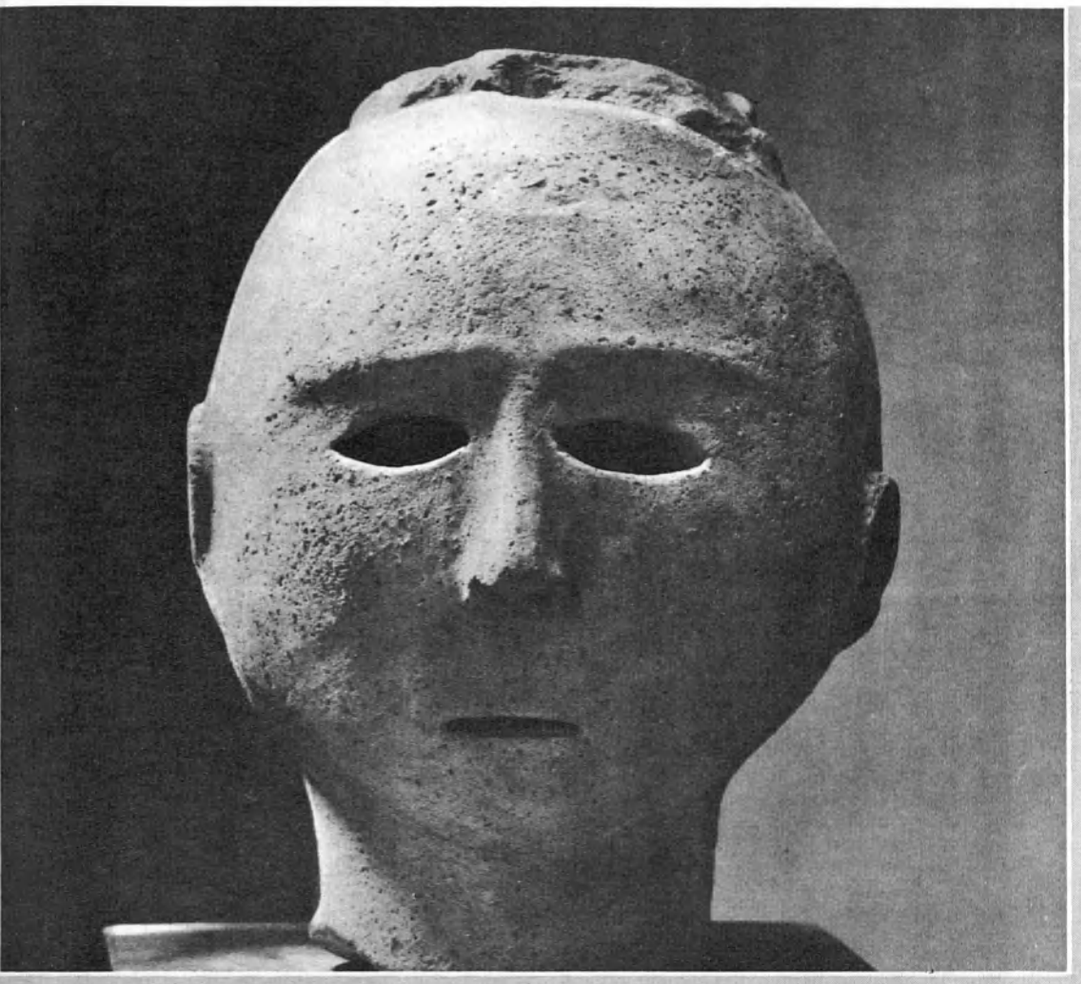
GOGGLED FIGURE. Figures with faces like this have been named "goggled" figurines on the assumption that a kind of protector like those employed by the Eskimos to guard their eyes against snow glare was also in use in the northeastern part of Japan. Clay figurines of this kind were venerated and hung in the primitive homes of Stone Age Japan, called "pit-houses" because dug in the ground. Many figurines represent pregnant women to whom, it is believed, men prayed that their families might grow and prosper.

HAIRSTYLES AND BEAUTY 1,500 YEARS AGO

HEAD OF A GIRL. The top of this Haniwa figure probably formed a large hairdress, but most of it is now missing. The delicate curve from the forehead to the nose and the expression of the eyes which have not been perforated at right angles, but obliquely, with a spatula, are admirably life-like. Other figures of the 5th and 6th centuries reveal the different hairstyles and modes of dress of both men and women.







SAD-FACED WOMAN with a large hairdress. In general the eyes of the Haniwa heads are most expressive. They are generally almond-shaped, but slight differences in the shape can be used to express dignity, joy or sorrow. Here, the sculptor has represented the ears by two simple rings of clay applied to the head. Haniwa figurines show women wearing jewellery round their necks, on their wrists, and sometimes round their ankles.

ANIMALS JOIN THE FUNERAL PROCESSIONS

TETHERED HORSES were most common of Haniwa animal figures. In the one shown here the form and the trappings have been executed with great skill. It has a saddle, ring-shaped stirrups, tethers, and a bit in its mouth. Pendants hanging from the tethers are "horse-bells." One interpretation of Haniwa works is that they were inspired by ancient Chinese custom of burying pottery funeral figures in the tomb for the comfort of "life beyond the grave."

who called a hundred *haji* or clay workers from Izumo Province and had them make clay figures of men, horses and other things which he set around the grave of the dead Empress in place of the real persons.

But this is only one of the ways in which the origin of the Haniwa have been interpreted and it is generally regarded as more legendary than real, for the Haniwa are primarily terra-cotta cylinders and could not be considered as symbolic substitutes for human victims. Another theory is that these original cylinders enclosing the burial mounds first came to have human faces on top and gradually developed into full figures. A third interpretation is that they were inspired by the Chinese custom of burying pottery funeral figures in the tomb for the comfort of "life beyond the grave".

Whichever of the theories is correct, it seems likely that they were indeed intended to be part of a funeral procession. Largest in number are those of men and women, some in armour, some dancing or singing or engaged in other activities. Some are smiling, others are weeping or have angry expressions. Most of the animal figures are horses in full trappings, though the sculptors have also depicted dogs, monkeys, boars and deer. The fact that there are swords, shields, desks, chairs and other objects as well as houses of various type may be taken as a token of the influence of the Chinese *Ming-chi'i* (Pottery figures of men, birds, beasts and objects placed in ancient Chinese tombs and mausoleums to be of eternal service to the dead).

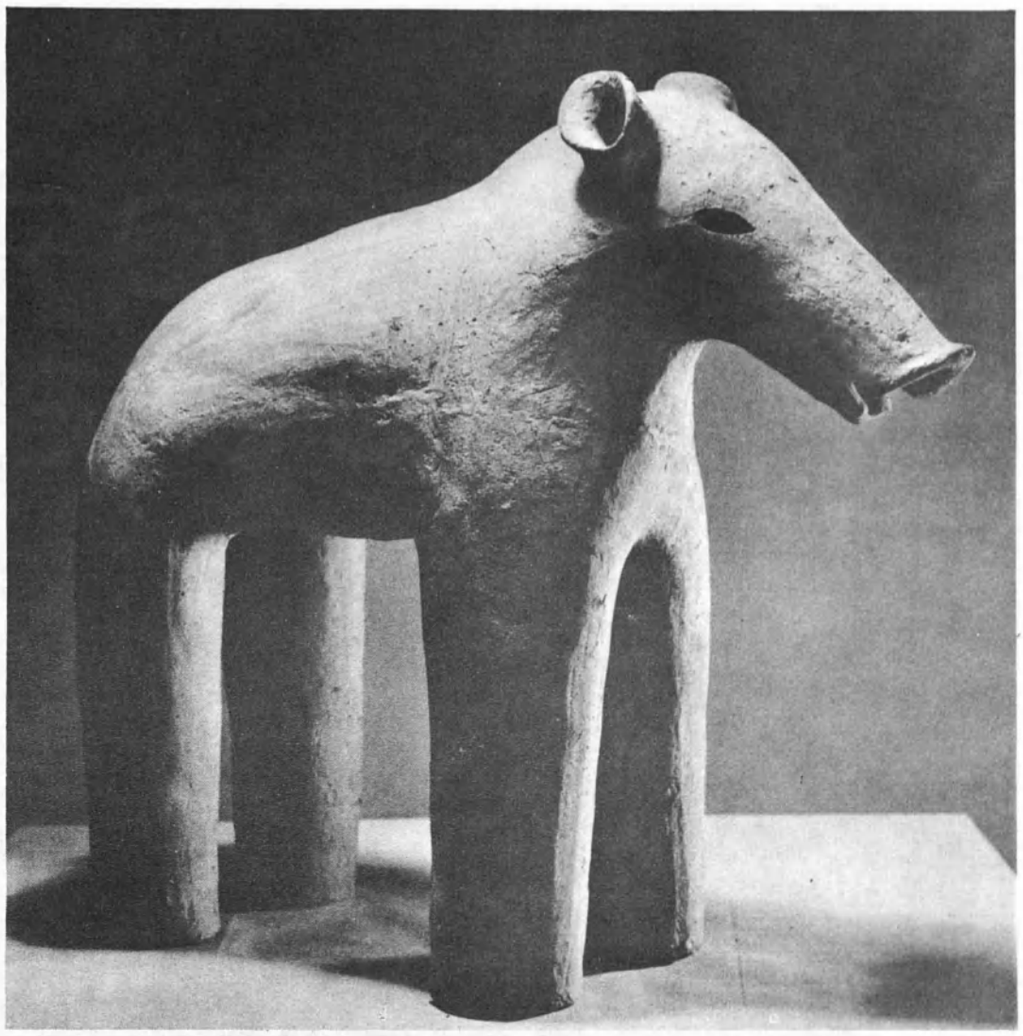
Haniwa figures were made for the huge tombs of men of rank from the fourth to the sixth centuries. (Perhaps the most impressive of the mounds is the Emperor Nintoku Mound in Osaka which covers an area of about 5,000,000 square feet). On the death of one of these men the work of "mass producing" the Haniwa began, the greatest number required being cylinders to surround the burial mound. They were erected in many circles so that hundreds and sometimes thousands were needed. They were made rapidly by *haji* and other clay workers normally engaged in making earthenware vessels, helped by other workers in the community.

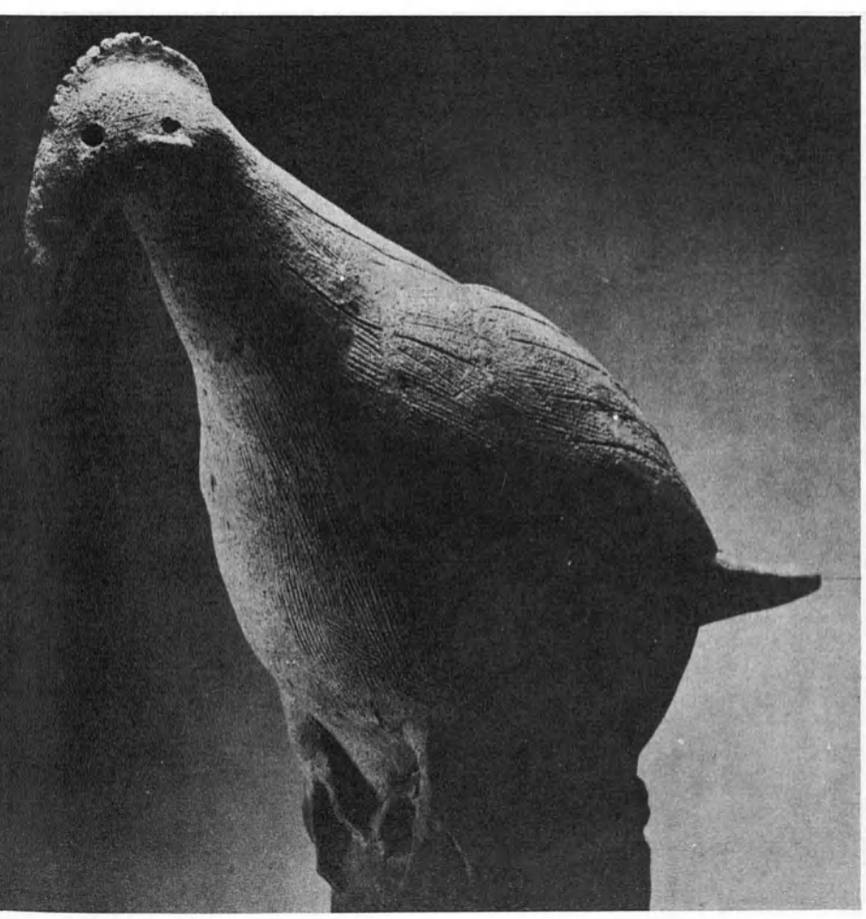
Human figures, animals and other shapes were made amidst the bustle and rush of this large-scale activity. It should thus be remembered that Haniwa figures were not made by sculptors working intently from models, but by craftsmen reproducing forms they carried in their minds. Elaborate treatment of details was not required as they were intended to be set up on a mound and looked at from a distance. Yet though they are not refined in style they are full of fresh vigour.

The process used in making Haniwa figures was to knead clay into the form of a rope, then to cut it into pieces of suitable length. These were then piled up to form the rough shape and this in turn was smoothed with the hands to its final form before being heated. Ordinarily the figures were between 50 and 100 cms. in height, the largest being the figure of a man found in the Mushashi Province, which measured 124 cms. They were made hollow for the economy of clay and to lessen the weight, as a large number had to be made at the same time. Had they been solid they would not have dried quickly and would have cracked while being heated.

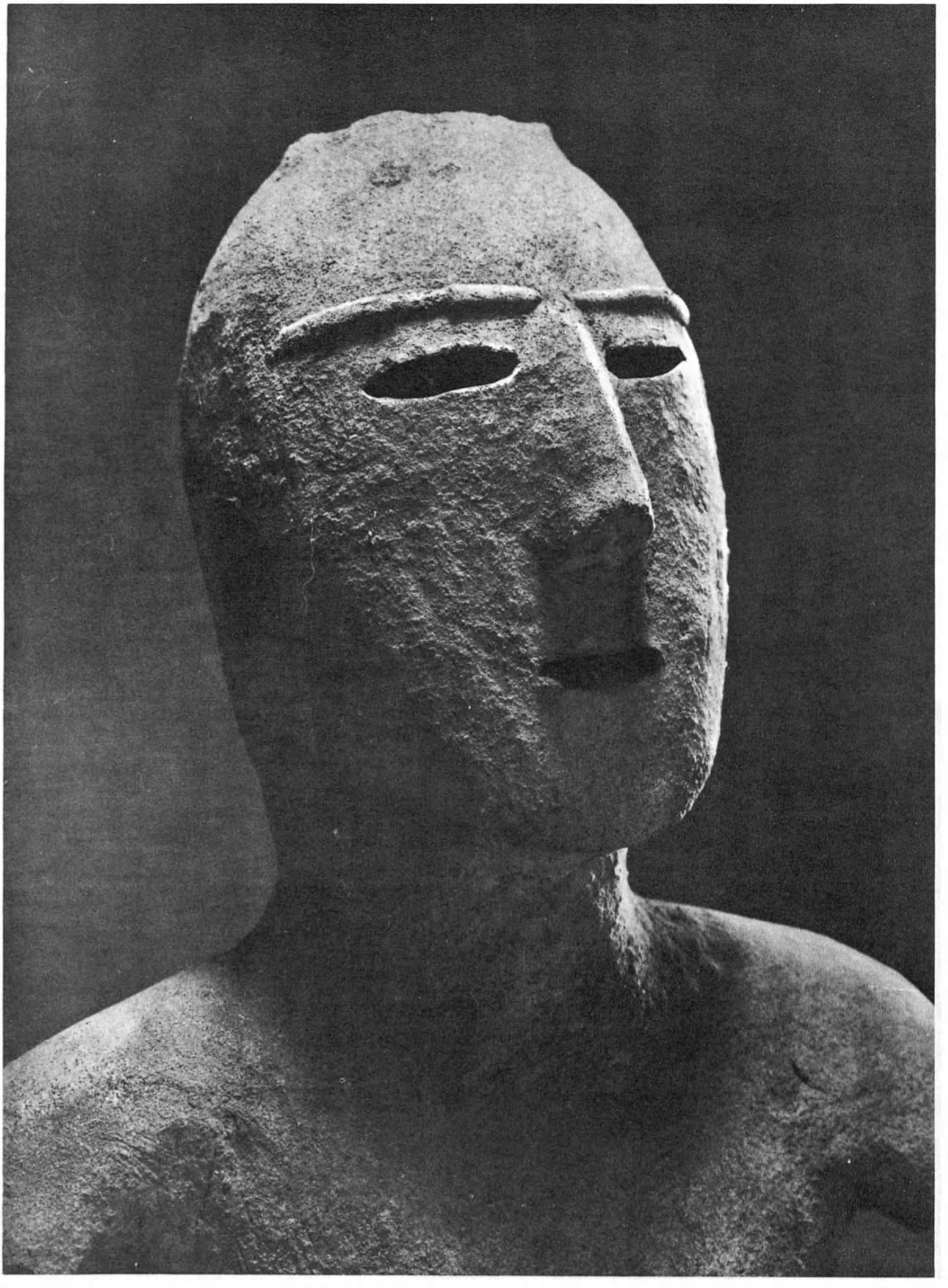
The clay figurines of the Jomon Period and the Haniwa figures, which have come to light only recently after being hidden underground for many centuries, have a remarkable freshness. Innumerable others are probably still waiting to be discovered.

WILD BOAR has body and legs modelled from cylinders. Though horses in full trappings make up the greater part of animal figures, the Haniwa sculptors modeled many other familiar animals such as dogs, birds, monkeys and deer. In earlier periods, hunters used crude wooden bows and stone-tipped arrows. Those who lived during the Haniwa era employed iron arrow-heads.



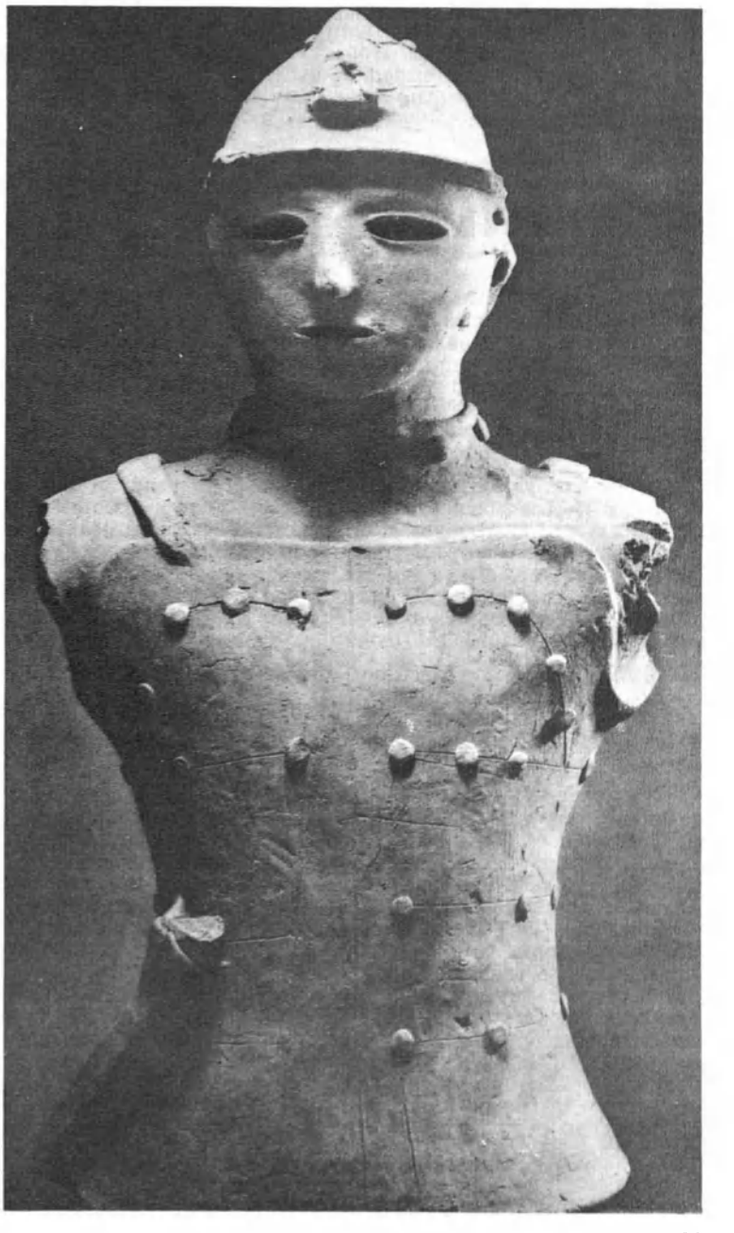


DOMESTIC FOWL illustrates the originality of Haniwa sculpture which lies in its vivid representation within simple forms. The skill of this particular craftsman is seen in his treatment of the well-rounded belly, the powerful feet and the delicate change of the sweep from the belly to the neck. Until the fifth century A.D. dogs and fowls were Japan's only domesticated animals.



PORTRAITS IN CLAY

IRON-CLAD WARRIORS. These two ancient warriors are among the finest of Haniwa figures. The one on the left is wearing full armour and a "peach-shaped" helmet. He carries a quiver on his back and a bow in his left hand, the right hand holding the hilt of his sword. Below, a warrior wearing a cuirass and a necklace and with a sword slung at his side.



POWERFUL PEASANT. This Haniwa figure of a man with powerful, vigorous body is presumed to represent someone in the prime of life who does heavy work such as farming. The cheeks are painted red and the ears are indicated by two large perforations. Holes also exist in the armpits, but these were probably made to prevent the figure being cracked in firing.

THE LANGUAGE OF COLOURS

MYTHS AND SYMBOLS

by Roger Bastide

WHAT'S in a colour? The answer is, sometimes a great deal. Down the centuries particular colours have been used to signify certain qualities or conditions. Crimson was the imperial colour of the ancients, just as today yellow is the imperial colour in the Far East. Among English-speaking people blue often stands for wisdom and spiritual truth and red for courage. Colours are often given spiritual or religious significance.

Although this symbolic significance is generally recognized the symbolism itself gives rise to some controversy. Some people—among them Frederic Portal, author of a well-known book, *Les Couleurs Symboliques,* published in Paris in 1938—maintain that colours have the same meaning for all peoples and at all periods of history; that white, for instance, is always the symbol of divine wisdom and red that of love. Yet a study of Portal's book shows that all the examples he gives are taken, with very few exceptions, from the same cultural region. If the inquiry was extended to other parts of the world should we come across the same tradition or find different symbolic meanings?

Why paint fathers blue and cypress trees red?

FURTHERMORE, are such systems based, in the final analysis, on actual observation? In other words is there any real basis for the symbolism of colour, and, if so, should it be sought in outward, visible things or in man himself? Should we attribute the significance of red, for example, to the fact that this is the colour of blood or instead, to the stimulating effect red-coloured objects are known to produce on the human nervous system?

Psycho-analysts have recently taken a hand in the solution of this problem and they have tried to combine the individual symbolism of colours with their traditional symbolism by a theory of the collective libido [the energy or motive force, either so far as derived from the sex instinct (according to Freud) or as derived from the primal and all-inclusive instinct to live (according to Jung).]

It is certainly no accident that Leonardo da Vinci, depicting a snake biting the belly of a woman, employed exactly the same colours as those used long. before by Indian artists in Mexico painting a similar scene; in both cases the colours represent and express the same impulses of the sub-conscious.

Certain aspects of nature, such as the blue of the sky or the green of grass and trees, obviously tend to arouse in all human beings, whatever their racial origin or culture, identical feelings which may produce the same kinds of symbolism. It has also been shown that the various wave-lengths of light have similar effects on all nervous systems, and, applying this knowledge, doctors sometimes use red in the treatment of smallpox, or blue bandages for patients who have just had an operation. Psychiatry has confirmed these facts. Havelock Ellis, the British psychologist, observed that green is the favourite colour of homosexuals, and studies of the painting of mental patients reveal that the colours used correspond to changes in the patient's emotional behaviour and that, in cases of periodic psychosis, dark and light periods alternate (1).

(1) R. Volinat, *L'Art psychopathologique,* P.U.F., Paris, 1956.

However, neither nature nor emotions can do more than suggest things to the mind; they do not offer a basis for a coherent system of symbols. Psycho-analysis may attribute a certain variation in the significance attached to colours to the fact that human feelings are ambivalent; thus red can express both love and hate; yellow, the mystic impulse and deceit; and green, hope and perversity. While these extremes may explain certain traditional systems of symbols, where yellow, for instance, can stand equally for God the Omnipotent, for strike-breakers and for a cuckold, they cannot account for a whole series of facts emerging both from the paintings of great artists and from those of mental patients. Here, the symbolism is an individual one, and not that of a group and this becomes clear when either painters or patients are questioned—when they are asked, for example, why they have painted their fathers blue or cypresses red. And when individual and group symbolism tally, it is not because psychological factors explain sociological features, but because, on the contrary, outward civilization imposes its standards and traditions on the individual, even though he may be mentally ill.

Colour as the expression of certain emotional reactions must therefore be dissociated from the problem of colour as a symbol. The physiological impressions of our sense organs, which cause us to talk of stimulating or depressing, cheerful or gloomy colours, may well, like the underlying impulses of the libido, converge with the cultural symbolism of colour; they may also oppose it or even ignore it completely. The cultural symbolism of colour must, therefore, be considered independently of physiology or psycho-analysis.

Every civilization has its system of symbols. Historians of mediaeval art come across many examples. At that time the church laid down the colours that artists were to use for the figures in religious paintings: the Virgin Mary had to have a blue robe and Christ, who is also attired in blue during his period of preparation, is clad in black during the temptation in the wilderness, and in white or red after His resurrection. The reason for the blue garments is that the Virgin Mary and the Messiah come from heaven, black represents the encounter with the prince of Darkness, and white and red stand for the two aspects of God's nature, His wisdom and His love.

Red for love (or hate) Black for the devil

THE real question, however, is whether or not the same system of symbols recurs in all civilizations. So far it has been the practice to compare the use of the same colour in a number of entirely different countries or during periods of history as distant as possible from one another. We might take as an example, Bacchus' red cloak, the crimson robe of the priest of Eleusis, the red mantle donned by Mohammed on Fridays, the garments of the Roman Emperors, the robes of Roman Catholic cardinals, and so on, and seek the same significance in things which may have a variety of meanings. (To find the real meaning, one really needs to study colour in every historical or cultural context and, above all, to consider all the uses made of red: for example the practice of the Amerindians who smeared their bodies with annatto before going off to hunt or to do battle—although this may have only prophylactic significance—or the use of the red

palanquin at Chinese weddings, which is connected with the dualism of yin and yang (2).

Research on the symbolism of colour is within the sphere of ethnography and, before using the comparative method, one must first make a study of each of the various systems of myths, proceeding slowly from one cultural area to the next, or following the routes of the great proto-historic or historic invasions. If we take two African systems as examples, we shall see that colours have a given significance only within certain contexts.

For the Dogons, the Blacksmith, who is to fashion men and their society, comes down to earth on the rainbow and takes its various hues to colour the stones from which the limbs of men are to be wrought, the various human organs, the seeds of plants and the compartments of the celestial granary. However, although this system is coherent, it would be very difficult to establish a link between the black of the left leg, the red of the left arm, or the white of the right arm and the Western tradition of black for the devil, red for love (or for hate) and white for innocence. The significance of the colours depends upon the myth as a whole; in another myth, they would have a different meaning (3).

When Ogoun, the god of war, turned crimson

THE Dogon system is very familiar to Africanists, but the Yoruba system is less well known, at least in this particular connexion, so I shall describe it in rather more detail. Every god has his own special colour: Oshala (the sky-god), white; Shangô (the thunder-god), red; Oshossi (the god of hunting), green and yellow; Oshoum (the goddess of fresh water and love), yellow, and so on. It is easy to understand how this classification of colours originated; white is reminiscent of the dazzling brightness of the sky, red of the fiery thunderbolt, green and yellow of the forest, and Oshoum's yellow of the muddy water of the rivers.

After that, however, the system runs on by itself, that is to say, any god, even if his powers or sphere of action do not suggest any colour, has one attributed to him in order that there may be no gap in the series. The history of the gods also connects further colours with them; for instance, because Shangô carried his father, Oshala, who could no longer walk, in his arms, white is henceforth added to his red, although white has nothing to connect it in the first instance, with the thunder-god. It is the myth which creates the symbols and not the existence of symbols with constant and previously fixed meanings which explains the myths. Moreover, as Oshala is white and it is he who created the first man and woman, white becomes the symbol of birth, and young women who enter a "convent" for initiation ceremonies —that is, to be reborn—wear white, even if they are subsequently to dedicate themselves to some other god, whose symbolic colour they will then wear.

Another example is provided by the chief wife of Shangô, Yansan, who, as she steals the "magic" of lightning from her husband, also takes on his two colours, red and white, while his two other wives or concubines keep their original colours. Here once more the colour owes its significance to the myth, or, in other words, it is the god who transforms it into a symbol.

The example of the Yoruba is interesting from another point of view: the Negroes of that nation, borne off to America as slaves, took with them their own symbolic classification of colours, which there, clashed with another classification, that of Christianity. This is proof that each civilization attributes different meanings to colours. Oshun, for example, whose daughters wear yellow, was assimilated with one of the forms of the Virgin Mary, whose children are dressed in blue.

As time passed, however, in Rio de Janeiro the African system began to show the influence of the Christian system and certain gods, like Ogoun, the god of war, changed their colour. He took on the red of Shangô, while Shangô's sons wore white and Oshala added yellow to his white. The reason why Ogoun became red is that, for Western people, red is one of the symbols of war (when angry, we "see red"), and Oshala added yellow to his original colour because golden-yellow is the symbol of the supreme Being. However, as one realizes on reading the books published by the leaders of Umbanda Spiritism (this being the form which the African religion takes in Rio), the symbolism and the myth are so closely linked that, in changing colour, the gods also change their personality.

An interpretation of colour systems should be undertaken with reference to an interpretation of cultures, and it would then become obvious that certain patterns can, in fact, be distinguished. There is, for instance, the dualistic pattern, which need not necessarily be white and black; in China, it is red and green and, among the Etruscans, it was red and black. There is also the cosmic pattern, based on the cardinal points or the different directions in space, which, of course changes, in passing from one hemisphere to the other, if the colours are linked, as they are among the Mexican Indians, with the seasons, winds, forms of vegetation and natural elements.

The problem of symbolism is not only of theoretical interest; it also has practical implications. Although we may not believe that the system of accepted symbols depends wholly or mainly on feelings, we do believe, on the other hand, that the opposite is true and that symbols may influence feelings in certain ways. There is not only colour symbolism: there is also colour prejudice, which is affected by the symbolism. Examples might be taken from Ancient Egypt, where the classification of beings was reflected in the order or colours, or from India, where each caste has its own colour. We need only consider the forms of colour prejudice at present existing among white men.

We have inherited from the Greeks and Christianity the two extremes of white and black, representing purity and evil. There is the example of Theseus, using the black sail to symbolize failure, and the white sail success, when he returned from Crete to Greece. In Christianity, the chosen ones wear white tunics, and devils are black. And this dualism can be seen even in our playing cards!

Colour prejudices: Negro with a 'white man's' soul

ALTHOUGH we do not realize it, this association of black with hell, death, the shades of night and sin, inevitably influences the European view of Africans, as if the colour of their skin had laid a curse upon them. This is so true that when someone white is speaking of a Negro whom he admires or of one who has become integrated into the white civilization, he may say that the person in question may be a Negro, but he has the "soul of a white man," as if, in order to make him acceptable, he must at all costs discover something white in the Negro.

Similarly, in the system of colour symbols, grey is to some extent ambivalent, being regarded either as white tinged with black or as black tinged with white; and in the same way attitudes towards half-castes tend to be unfavourable or favourable, according to whether they are seen as a travesty of white (white tinged with black) or as an approach to white (black tinged with white). Hence the existence of two contrasting forms of prejudice among white people who thus may be prejudiced to a greater or lesser extent against half-castes than against Negroes.

It certainly cannot be said that colour prejudice is based solely on such symbolism, but the latter definitely has an influence, even among well-meaning white men. To recognize the relativity of systems of symbols may therefore be an effective aid in eradicating race prejudices (both against Asians, whom an Occidental may tend to consider untrustworthy or hypocritical because he has been told at school that they are yellow, and against Africans) and of doing away with ethnic stereotypes—two of the great tasks that UNESCO has set itself.

(2) Terms of a dualism which runs through much of Chinese philosophy, folklore, divination, religion, medicine and magic. The yin is the female, negative, dark, evil principle as contrasted with the yang, the male, positive, bright, beneficent principle.

(3) Marcel Graule, *Dieu d'Eau*, Ed. du Chêne, Paris, 1948.

SINGING SANDS

A strange concert heard in the desert

by E.R. Yarham

U. N.

Two explorers, Bertram Thomas and H. St. John Philby (1), who crossed the Great Desert of the so-called "Empty Quarter" of Arabia, both describe how they were startled by a phenomenon known as "Singing Sands", the mechanism of which has long been discussed. Thomas and his party were in the heart of the desert, floundering through heavy sand dunes, when a loud droning like a musical note broke the silence. One of his Badu companions pointed to a steep sand cliff about 200ft. high and shouted, "Listen to that ridge of sand bellowing!" All that Thomas could see was a filmy wisp of sand being carried up the gentle windward slope to spill like smoke over its top. On another occasion, he was similarly startled by a curious note emitted from the sand as his camel trod on it, but the tribesman at his side, a Murri who was familiar with the phenomenon, could only give as an explanation that it was some activity in the uppermost of the seven underworlds. The Arabs, in fact, believed the sounds to be the spirits of the sand dunes talking.

In Thomas's experience, the note continued for about two minutes, ceasing as abruptly as it had begun. When Philby noted a similar phenomenon a few months later, it was set up artificially and unintentionally. He, too, was in the heart of the Empty Quarter, and he heard the noise in the afternoon, at about the same time as Thomas had. He was resting in his tent when he heard a deep, musical, booming sound. Looking out, he discovered that it had been set up by one of the party walking up the steep sand slope of the dune encircling the camp. His description is worth quoting:

"Quite suddenly the great amphitheatre began to boom and drone with a sound not unlike that of a siren or perhaps an aeroplane engine—quite a musical, pleasing, rhythmic sound of astonishing depth... The conditions were ideal for the study of the sand concert, and the first item was sufficiently prolonged—it lasted perhaps about four minutes—for me to recover from my surprise and take in every detail. The men working at the well started a rival and less musical concert of ribaldry directed at the Jinns (desert spirits) who were supposed to be responsible for the occurrence... I realized that the key to the situation was Sa'dan, seated on the top of the slope. It was evident that the music was being engendered by the sand sliding down the steep slope from under him."

Philby followed Sa'dan's example and found that he, too, was able to produce the same sound by setting masses of sand in motion down the side. The noise commenced with a grating sound and increased gradually to a musical booming, which just as gradually decreased and died away. He experimented by pushing a bottle into the singing sand, and as he withdrew it there followed a wail like that of a trombone. At another time he plunged into the moving mass of sand half-way down the slope, and it appeared to throb beneath him like a great organ.

The singing sands of southern Arabia have become

(1) Bertram Thomas's book, *Arabia Felix*, describing his journey in 1930-31, was published by Jonathan Cape, 30 Bedford Square, London, in 1932; H. St. John Philby's account, *The Empty Quarter, being a description of the Great South Desert of Arabia, known as Rub'all Kbali*, was published by Constable & Co., 10 Orange St., London, in 1933.

known to science only during the present century. But the phenomenon was known to the Chinese at least a thousand years ago. One of their writers left an account of an area in the province of Kansu where it had been noted in the ninth century. He described the "Hill of Sounding Sand", which was 500ft. high in places and possessed strange qualities: "Its peaks taper up to a point, and between them there is a mysterious hole which the sand has not been able to cover up." The writer said that in the height of summer this hill of sand gave out sounds by itself, but if trodden by men or horses, the notes could be heard for long distances.

The same scribe described a custom which was followed to induce the singing: "It is customary on the "tuanwa day" (the Dragon Festival on the fifth day of the fifth moon) for men and women from the city to clamber up to some of the highest points and rush down again in a body, which causes the sand to give forth a rumbling noise like thunder. Yet when you come to look at it the next morning the hill is found to be just as steep as before. The ancients called this the Hill of Sounding Sand: they deified the sand and worshipped there."

Two missionaries in inland China, Miss F. French and Miss M. Cable, have also recorded their observations of the phenomenon in Chinese Turkestan. The City of Sands (Tunwang) takes its name from the ranges of sand dunes that lie to the south, stretching out into the great desert of Lob. These sand hills possess the property of "singing" when the sand is moved. Before a desert gale blows, a sound like the rattle of drums is heard, but at any time the hills can be made to "sing" by climbing to the knife-like edge of the highest point and sliding down. The great vibration then produced seemed to spring from the very centre of the dune.

'Iron Swiss' heard drums of the dead

TSCHIFFELY, the "Iron Swiss" (2) who rode on horseback from Buenos Aires to Washington, records an experience on the Peruvian coast. He fell asleep one night on a sand hill, but was awakened several times by a noise like the beating of drums or like a motor launch travelling on a river. As he could see nothing, he went to sleep again.

The next morning he noticed that he had been sleeping near a *gentilar*, as the ancient Indian burial grounds are called. He was asked by the Indians if he had heard the *manchang*. This sounded rather like Chinese to Tschiffely, and he asked them what it meant. They explained that the sand hill was haunted and that every night the dead Indians of the *gentilar* danced to the beating of drums. In fact, they told him so many blood-curdling stories about the hill that he began to consider himself lucky to be alive. He heard later that the explorers, Baron von Humboldt and Raimondi believed that the sounds heard so often during the night from this hill were due to underground waters that moved as the temperature changed. Another theory is that sea breezes blowing from a certain direction hit the sandy ripples on the slopes of the hill to produce this strange sound.

Although it is to the deserts that one must turn to hear the finest exhibitions produced by singing sands, a somewhat similar phenomenon has been reported from beach sands. An example, unique along the west coast of Scotland, is afforded by the singing sands of the Bay of Laig on the little island of Eigg in the Hebrides. The first such discovery in England appears to have been made by C. Carus-Wilson, who about 60 years ago found singing sands at Studland Bay on the coast of Dorset. They have been recorded also on the coast of North Wales; and in the United States two observers have reported them at seventy-four places on the Atlantic Coast alone.

Beach sands "sing" differently from desert dunes. The beach sands are best described as "whistling" or "squeaking," according to R.A. Bagnold, who summarizes existing knowledge in the final chapter of his book *The Physics of Blown Sand and Desert Dunes*. The squeak or whistle is produced, he explains, by any rapid disturbance of the dry top layer, especially just above the high water level when the sand has recently dried out after a shower. It is produced when the palm of the hand is swept across it quickly or when the sand is given a light stab with end of a pencil. When the sand is removed from the beach, it does not long retain its sound-producing quality. Grains of singing beach sand examined were rounded, but not markedly so, and were fairly uniform in size.

In contrast to the whistling of the beach sands, "the great sound which in some places startles the silence of the desert" is quite a different noise, according to Bagnold, who wrote:

"I have heard it in south-western Egypt 300 miles from the nearest habitation. On two occasions it happened on a still night, suddenly—a vibrant booming so loud that I had to shout to be heard by my companion. Soon other sources, set going by the disturbance, joined their music to the first, with so close a note that a slow beat was clearly recognized. This weird chorus went on for more than five minutes continuously... Native tales have woven it into fantasy; sometimes it is the song of sirens who lure travellers to a waterless doom; sometimes it is said to come upwards from bells still tolling underground in a sand-engulfed monastery..."

The sounds produced by desert dunes certainly vary; travellers have compared them to a ship's siren, a throbbing organ, the beat of a drum, a trombone, and the twanging of a monster harp. In some instances, it seems that the softer tones are missing; others say that standing on the sand when it is singing is like resting on a huge stringed instrument while a bow is being drawn slowly across it. The note emitted by the desert sand is much lower than that of the beach sand and at a distance of 600 yards has been likened to thunder.

Writing from Egypt some few years ago, Lieutenant-Colonel de Lancey-Forth spoke of the following experience in the great sand-dune country to the south of Siwa:

"I found, after a strong westerly wind had blown throughout the day and banked the fine drift sand high up on the knife-edged tops of the dunes, that sometimes in the evening, when the wind had died away, leaving a deep stillness in the air, this fine drift sand slid down in streaks over the coarse big-grained red sand which forms the steep slopes of the solid part of the dunes, and the friction of the one rolling over the other gave out a noise like distant rumbling thunder with a deep musical note as that of a cello in it."

Forth's reference to the evening is parallelled in Philby's account. When he was listening to the singing in the afternoon, one of his men (referring to the desert spirits) said, "You wait, just wait till the evening and you will hear them letting off their big guns."

Beaches that 'whistle' and 'booming' deserts

BERTRAM Thomas, too, noticed the noise late in the afternoon, when the heat of the day was fading Apparently, another factor also favours the close of day. During the day the wind blows the fine drift sand to the tops of the dunes, and toward sunset, when the wind usually dies down, it begins to roll down the slopes. Dryness seems essential, for the ancient Chinese manuscript states that the Hill of Sounding Sand gave out noises only at the height of summer; and H. St John Philby, the explorer already referred to, likewise reported that early in the morning, when the air was cool and the sand somewhat moist, he failed to elicit any response from it. And a few weeks later when there had been a little rain, there was no music in the sands.

Examination of the sand has not revealed any peculiarity linking the whistling sands of the beach with the booming sands of the desert. Samples from the dunes do not reveal any distinguishing features. The grains are no more uniform in size than those of many silent sands; and though clean sand sometimes seems to sing best, Bagnold heard it in a desert region where the sand was dirtier than usual and was wetted appreciably only once or twice in a decade.

Physicists are generally agreed that the sounds are caused by the rubbing of grains against each other, but as yet there is no real explanation of the mechanism by which they are produced. When further critical studies are made, the answers may be forthcoming. Meanwhile, when you are in the desert, keep an ear open for one of the strangest concerts ever to come from nature's versatile music box.

(2) *Aimé Felix Tschiffely made his great ride "Southern Cross to Pole Star", from the Argentine to the United States, on two native horses, Gato and Mancha.*

PRESERVING THE CREAM OF THE SCREEN

by David Gunston

Archives Cinemathèque Français

VISUAL ILLUSIONS on the screen were first created by Georges Méliès, whose work in France permanently enriched the technique and scope for film-making by introducing it to fancy and to fantasy and by making it tell a story. In 1900 Méliès made a series of films embodying tricks, fantasies and illusions. Above, illusionist effects in early Méliès film.

It has been said, with no little truth, that one of the marks of civilized man is his instinctive sense of history, both past and future, expressing itself in the desire to preserve for posterity the best that he has inherited and produced himself. This has certainly been true of the arts for a very long time. Books, poetry, plays, music, sculpture, painting and architecture have all been preserved for succeeding generations, or kept alive for the future. This was originally done primarily by interested wealthy patrons, but for a long time now states and governments have lent an increasingly supporting hand, and now usually supplant the private patron.

Yet as a new medium arriving at a time when preservation was a fully accepted practice, the cinema has not been so fortunate.

The very transience of the screen image has been against any sense of permanency from the start. In addition, being ineradicably linked with large-scale commercial interests, the cinema has sometimes had a considerable struggle for permanent preservation in any historical sense. This has always been especially ironical, since a popular motion picture still continues to reach a wider international audience than any other form of contemporary art, popular or otherwise.

Pious hopes were expressed during the days of the early silent films that some sort of museum might be made of films of particular interest, especially newsreels of notable events, but very little was done.

However, the prospects are now brighter and more encouraging than they have ever been, thanks to the continuing and remarkable growth of the international film archive movement. Started in the 1930's by France, Great Britain and the United States, this has now taken root in very many countries and in many different forms, yet always with the basic aim of keeping from oblivion and the usual limbo of actual physical destruction the best that the screen offers the world over. In spite of some irretrievable losses occasioned by such a late start, the postwar spread of the archive idea may now be said not only to be vital and thriving wherever it is found but, largely unheralded and unobserved as it is, "one of the significant cultural developments of our time."

Some of the archives began as small private collections, others have always been partly State-aided, whilst others again are off-shoots of Government Departments. Some may be concerned mainly with the physical preservation of the old films they possess, or with the presentation to the public or interested students of historical film programmes. Many do both. All have to consider the many problems of the international exchange of films, the safe-

guarding of rare or exceptional films from extinction, and the paramount necessity for maintaining a satisfactory relationship with the commercial film world.

The film archive movement began more or less simultaneously in the three countries mentioned, thanks to the enthusiasm and determination of three leading experts. In 1935, with the aid of a generous grant from the Rockefeller Foundation, the Museum of Modern Art Film Library was set up in New York under the dynamic Miss Iris Barry, who forthwith went to Europe on an extensive and invaluable "shopping expedition" for disappearing film classics. In the same year in Britain, the National Film Library (now re-shaped and re-named the National Film Archive) was established by the British Film Institute in London to carry out one of the Government-sponsored Institute's objects on its own foundation two years earlier, viz. "to establish a national repository of films of permanent value", and the scholarly Mr. Ernest Lindgren became its Curator. At about the same time in France was born the Paris *Cinémathèque Française,* presided over by the distinctive figure of M. Henri Langlois with his passionate love for any rare, old or defaced film. Each of these three assiduously built up independent collections for permanent preservation, but the ultimately international aspect of the matter was never far from their thoughts.

Similar "cinémathèques" began to appear in other countries, and in 1938 the three original archives combined with the biggest of the newcomers, the Reichsfilmarchiv in Berlin, to form the International Federation of Film Archives, which held its first meeting in New York. Since the war the former Reichsfilmarchiv has disappeared, but the Federation itself has advanced enormously, strengthened by the adhesion of other archives created in Amsterdam, Belgrade, Bogota, Brussels, Budapest, Buenos Aires, Copenhagen, Lausanne, Lisbon, Madrid, Milan, Montevideo, Moscow, Oslo, Prague, Rabat, Rome, Sao Paulo, Stockholm, Teheran, Tokyo, Vienna, Warsaw, among other places. In all there are now some 30 effective and provisional members, not counting the corresponding members in Australia, China, Cuba, the Republic of Ireland, Finland, Israel, Peru and Venezuela.

Many of these archives are national bodies, financed by their governments, and almost all have some official status, which of course is a good thing. They are organized by men and women of enthusiasm and integrity who have as great a sense of their vocation as curators and librarians in older fields of art and mass communications.

The Federation is now a truly international body that goes beyond the hopes of its founders twenty years ago. Under the Presidency of M. Jerzy Toeplitz, of the Warsaw Central Film Archives, the germs of interest and endeavour it has been able to sow in recent years are springing up—and bearing fruit—almost everywhere. It has its headquarters in Paris, where its Executive Committee meets four times a year, and holds an annual Congress in the various member countries in turn. Its purposes are officially defined as the promotion of personal contacts between all its members to facilitate the exchange of both films and information about them, and the maintenance of an agreed code of rules to ensure that all members exercise that self-discipline in the use of their films which will entitle them, individually and collectively, to the confidence and support of the commercial film industry in every country.

This last factor is highly important, for inevitably the goodwill of any archivist movement depends for its healthy continuance on happy relations with the suppliers themselves. Almost all new acquisitions by archives have to come from contemporary film-producing countries. Older films, some of them perhaps originally owned by companies no longer in existence, may be salvaged from a variety of sources, but often one archive can obtain them only by exchange and duplication with archives fortunate enough to hold copies.

Yet in practice the Federation does much more for its little-known cause. It organizes International Film Exhibitions, as held in Paris and Berlin recently, the next being planned for Prague in 1958. It runs "Weeks" or "Days" of some national cinema in other countries, like the Week of Italian Cinema in Poland, or of the Scandinavian Cinema in France, already held with such success. It has further founded the International Bureau of Historical Cinema Research, which in November 1957 held its first International Congress in Paris, and which is regarded as an important step towards making available data on film history to all who seek it. The Federation feels itself directly responsible for the serious work done in the field of cinema history, and gives all possible help to bona fide students. Indeed, there now exist in many countries national film research commissions closely linked with archive-members of the Federation.

Apart from the commercial restrictions which may hedge round fairly recent films, and the often interminable copyright tangles of earlier films (some of which, like the earlier Chaplin and similar short comedies, have passed through many hands since they were made), the greatest single problem of any film archive, great or small, official or private, is the appallingly short exectancy of life of the average reel of film. Unlike a book or painting, a film cannot be effectively preserved simply by being owned by a far-sighted person or organization.

If it is an old nitrate

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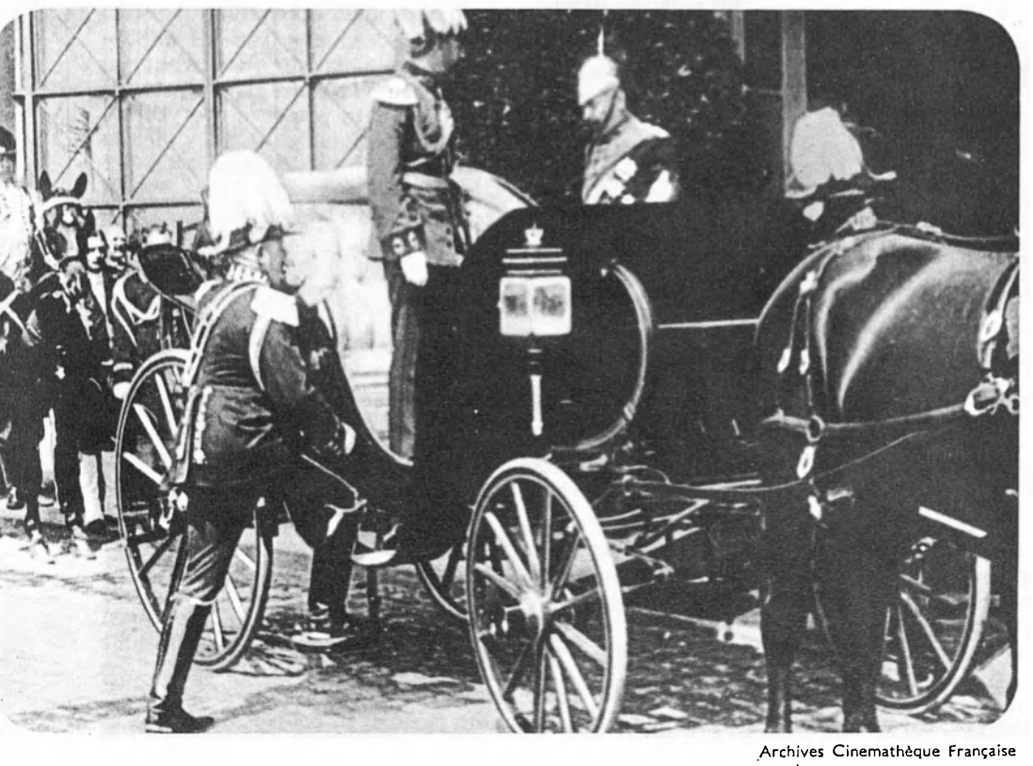


Archives Cinemathèque Française

NEWSREELS of topical events were the type of films with which the motion picture industry started on its world career as an entertainment medium. The first real newsreel was made by the Lumière Brothers in Paris in 1895. They filmed the arrival of delegates to a Congress of French Photographic Societies and created a sensation by screening film two days later. Early newsreel photo, showing Kaiser William II (on right facing camera) entering open carriage during a state visit.

Which films deserve saving from oblivion?

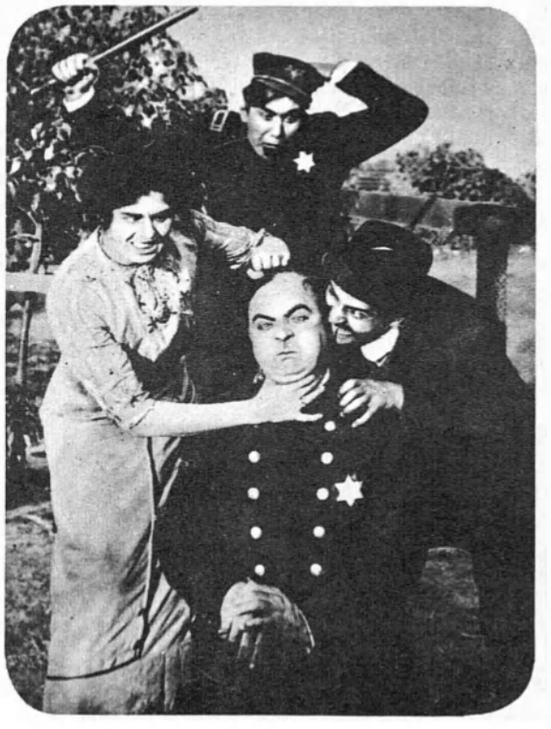
or celluloid film, the base will undergo chemical changes in a surprisingly short space of time, say 30-50 years. This celluloid base will give off gases which unite with the atmosphere to form nitric acid, which immediately attacks the still stable photographic image, turning base and emulsion into a sticky mess—a process that, once started, may swiftly eat through priceless reels of film. If the film to be kept is printed on the newer cellulose acetate base, generally used in the industry since 1951, it does have a longer optimum life, but unless given certain physical conditions of storage, will readily dry out, and become brittle, shrunk and quite impossible either to project or duplicate.

Although it is theoretically possible for the various film-producing companies to preserve copies of their own pictures rather after the manner in which book publishers and newspaper offices keep "file copies" of all their wares, in practice very few do so, and hardly any in the sense of protecting them for posterity. This may seem odd, but is partly because a film-producing or distributing company is a commercial concern primarily interested in the financial exploitation of its products. Once a film's box-office life is regarded as over, it may well be actually destroyed to give up precious storage space for new movies. Nevertheless there is an element of short-sightedness, even business shortsightedness in this policy, as many firms have now realized.

Apart from the whole range of films that may be sold to television, the popularity of selected "revivals", first proved by the postwar re-issues of Chaplin feature favourites like *City Lights*, *Modern Times* and *The Gold Rush* in many European countries, is proving to them that the time is coming when a good film is no longer to be dismissed just because it is "old". Hence there is a growing interest in and appreciation of the film archive movement, since few producing companies have the time, space or the technical skill needed to offer adequate preservation facilities to earlier pictures. This trend of offering to archives, under copyright safeguards, films that may still be financially valuable for preservation under ideal conditions and care is a growing one. It was advanced in spectacular fashion recently when Lord Rank, of the British film industry, presented to the National Film Archive in London nearly 250 master fine grain prints of films made by British firms from 1930 to date.

Nitrate films in storage also present a grave added risk of fire danger, since celluloid is highly inflammable, so they need to be stored in metal cans on metal shelving under special safety precautions. Furthermore, the best storage conditions for such films, which represent the bulk of the collections of all archives, may involve expensive air-conditioning: such prints, being physically unstable, require a steady, cool temperature of about 33°-40° F., with a 50% relative humidity. Underground vaults provide these conditions most readily, but the ideal is always costly, awkward to maintain and sometimes difficult to attain. In consequence there is a growing tendency to copy or "dupe" crumbling old nitrate films on to new acetate stock. If this is given the necessary degree of humidity, its chemical stability is assured for a reasonable life, and it presents little or no fire risk. Under good conditions, acetate films may survive for as long as 200 years, and theoretically they can then be duped again on to fresh stock.

This procedure is the ideal of every archive, but in practice the expense involved often rules out the extensive copying of very old films. A compromise that is becoming increasingly adopted is that now followed as a matter of regular policy by the British National Film Archive. All 25 year-old films in its collection are regularly subjected to a chemical ageing test, in which a small circle is punched out of a single frame on the reel and subjected to laboratory testing that artificially speeds up its chemical disintegration. In this way, the likely future life span of any reel of any film can be estimated and the necessary duping done before it is too late. This immediately brings in the question : what films in poor state shall have duping priority with the funds available?



USIS

ENDLESS GAGS were worked into the comic films of Mack Sennett, undisputed master of early comedy producers in the U.S.A. His use of slapstick and unexpected situations and his extraordinary sense of the ridiculous were revealed in hundreds of films. Two groups he used frequently—and made famous—were the Bathing Beauties and the Keystone Cops. Above, two cops in trouble.

This, and similar technical matters are discussed freely between members of the Federation, which is responsible for a growing interchange of opinions and films. There is always the possibility of exchange of rarities for showing or copying, for it would be futile for one archive to spend a lot of money duping a crumbling copy of some screen classic when a more fortunate archive can supply a better copy from its own collection.

There remains the all-important problem of just what to preserve. No archive wants, or can hope, to preserve everything. Only the cream of the world's vast output of films are worth keeping anyway. But beneath this high level of quality, there are many productions that ought not to perish, whether for their intrinsic artistic merit, their place in cinema history, their realism or imaginativeness, the technical innovations or acting performances they contain, or with documentaries and newsreels, the actual events they portray.

It is the aim of every archive to strive to protect the best in every sphere and from all sources wherever possible, which makes the co-ordination of the Federation invaluable. And always there is the burning question of to what extent is an archive to allow its treasures to be shown publicly. Quite a number of archives already give regular showings of many of their films, but there are sometimes copyright and other snags, and the fact is that where a single copy of a rare film is held, to project it at all will shorten its life. So unless and until duplicate copies of everything can be taken, some films cannot be shown to the public ad lib.

Yet a wide availability of viewing is ultimately the aim of the whole idea, since unlike a book in a library or a painting on a gallery wall, a film in a can is quite useless unless it can be properly projected and shown publicly.

SCHOOL FOR BALLET
Soviet youngsters follow a great tradition

by E. Souritz

TAMARA KARSAVINA, one of the greatest of Russian ballerinas, called her Memoirs *Theatre Street*—formerly the name of the street where the Leningrad School of Ballet is located. This school also figures in the Memoirs of Anna Pavlova. More recently, Galina Oulanova gave the title, "The Ballerinas' School" to the story of her artistic career, and although she used the word "school" in a wider sense, meaning the experience gained by an artist throughout her career, she too referred to the years she had spent at the Leningrad School of Ballet.

School certainly plays a more important role in the life of a dancer than in that of any other kind of professional artist. Ineluctably, the unique road leading to a ballet company starts from a dancing school. Entering the choreography classes about the age of nine or ten, the future ballet dancer spends the rest of his or her childhood there and not until the age of 18 does the student enter a ballet company.

In the early Autumn just before the school term begins, boys and girls (boys are usually a minority) invade the corridors of the oldest ballet school in the Soviet Union. Some girls are still wearing their light summer dresses; others have put on their school uniforms (only children who have already attended school for three years can be accepted as candidates). All the girls are excited and nervous as they wait their turn to be examined.

The first hurdle is the medical examination. Only children with sound hearts and healthy lungs can hope to stand up to the many years of hard physical effort that lie ahead. Weak eyesight can also be an obstacle to a ballerina's career; a poor ear for music is an even greater one. Finally a committee of teachers from the school judges each child's aptitude for dancing.

Eventually the children complete their entry examinations. The doctor has found them physically fit, the music master has judged that they have a good ear for music and a sense of rhythm, the teachers are satisfied with their aptitude for dancing, and they have passed the educational tests. As pupils in the School of Ballet they now begin a new life —"a life of hard work and suffering", as Anna Pavlova called it, but also one filled with the joys of creativeness. The unwavering rule is the daily exercise, "the lesson", as dancers call it. "For a dancer every day is a working day," writes Oulanova, "in summer, on holiday, work is still indispensable."

Schools reopen throughout the Soviet Union on September 1. On that day a small pupil in the beginners' class, wearing a white starched dress, white stockings and slippers, enters the large, bright classroom for the first time. On the teacher's command she goes over and stands beside "the bar"—the practice rail running the length of the wall. From this moment, unfailingly,

Cont'd on next page

Official Soviet photos

PRIMA BALLERINA. Anna Pavlova, one of the world's most admired dancers, was trained at the oldest of Russian ballet schools in Leningrad. The uniform she wore as a student in the last decade of the 19th century (top of page) resembles those worn by today's pupils (above).

Official Soviet photo

NURSERY OF THE BALLET : Young pupils at the Leningrad School of Ballet practise in the classroom where some of the greatest names in ballet received their training. Many changes have taken place in the organization and programme of the school since its foundation 200 years ago.

right to the end of her career, the dancer will begin the day with this rite, continuing to do the same movements she learned in her childhood.

Many changes have taken place in the Leningrad School during the two centuries since it was founded. Once it was a boarding school for 100 pupils and much of the building was taken up with dormitories, bathrooms and dining rooms. Now there are four times as many students, and the building has had to be enlarged. So today most of the students live outside, and only those from other parts of the country are boarders.

The present school not only trains artists for the Leningrad Ballet, but also for those of many other Russian cities. To the different national groups of the school come youngsters from republics all over the U.S.S.R. They arrive too from foreign countries, Rumania, for example, and even from as far away as Mexico, Cuba and Indonesia. To ensure that they shall all have a solid educational background, they are taught the same subjects as children in normal secondary schools. The future ballerinas do geometry problems, perform chemistry and physics experiments and study geography and natural sciences. Seven years of secondary education are followed by three years of literature, history, foreign languages, and studies of the history of the theatre, the ballet and music.

The life of the school is fuller, freer and more active than it was 50 years ago. Yet inside its walls the new and the old mingle as nowhere else. In its corridors the past seems to live again and the ancient traditions are in evidence imprinted on a modern backcloth. Faces of famous ballerinas who were once pupils look down from photographs on the walls. They too worked at the same practice rails. They too walked, somewhat sedately in double files, along these vaulted corridors, followed by the swish of their long skirts. The marks made by their tiny feet can still be seen in the worn, tiled floors of the landings where today little girls wearing the red neck-ties of Pioneers are playing.

Yet, these same little girls will greet a grown-up with a deep curtsy, following a tradition still maintained in schools of ballet.

Another tradition handed down from the past is the performance given at the end of each school year. Over a century old, the custom continued during the days of Pavlova and Fokine and also when Oulanova completed her training, and so it goes on today. But changes have come in the repertoires of these shows. Nowadays the pupils draw inspiration from the heroes of classical literature. They have based performances on *Till Eulenspiegel* by the Belgian writer Charles de Coster, on Gogol's *Christmas Night* and on Pushkin's *The Postmaster.*

They also look for ideas in modern events. Last year, for example, the school presented a new ballet, *The Girl of the Snows,* based on a popular Soviet novel which tells of life in Russia's far northern territories. They draw too on their country's rich folklore, and on those of other lands.

In the remotest republics of the Soviet Union dancing is taught by teachers trained in the Leningrad School of Ballet and by their pupils. In Europe, America, Africa and Australia dancing is taught by the pupils of the former ballerinas of St Petersburg. The traditions of the School continue today as little girls from all over Russia practise in the same large, bright classroom of the building in "Theatre Street", where Anna Pavlova, Fokine, Karsavina and Oulanova began their careers.

Letters to the Editor

FACTS ABOUT HAFFKINE

Sir,

I am a Soviet writer and I devote most of my works to men of science. Of all human activities, science, and particularly medicine is, to my mind, the most fascinating. Recently I had a stroke of luck: I came across some papers dealing with a remarkable personality, the Russian doctor, Vladimir Khavkine (Haffkine).

In these papers were accounts of the work carried out by the Bacteriological Institute of Bombay which has been named after my distinguished compatriot. There was a short biography of this man and from it I learned the following facts.

Born in Odessa, Vladimir Marcovitch Haffkine studied at the university of this city. A collaborator of Pasteur and of Metchnikov (the famous Russian biologist), he made several stays in India and devoted 18 years of his life (from 1893 to 1915) to that country. His work there earned for him the affection and highest esteem of the Indian people.

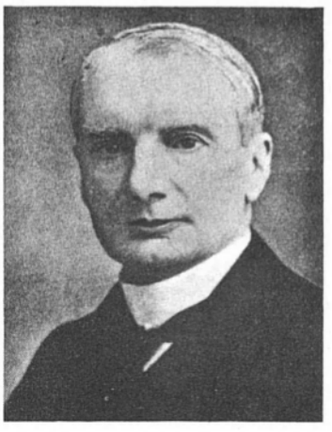
He first went to India during the worst period of a cholera epidemic. In 1892 in the Paris laboratory of Metchnikov, Haffkine had discovered a new vaccine against cholera and, after testing it on himself and on several friends (all of them Russian engineers and doctors), he decided to carry out mass inoculations with it on people in India. Despite the worst threats of people who were opposed to inoculation, Haffkine travelled for two years in the farthest corners of the Punjab, of Assam and other regions of the sub-continent, inoculating thousands upon thousands of people. The success of his vaccine was universally recognized.

In 1896 an even greater scourge, plague, swept India. Dr. Haffkine was one of the first Europeans to hurry to Bombay, centre of the epidemic, whose inhabitants were fleeing in terror. Within six weeks he had prepared the world's first anti-plague vaccine.

On January 10, 1897 Dr Haffkine carried out a courageous experiment. Without saying anything to his co-workers he gave himself an injection of a preparation containing plague germs. The reaction it produced was agonizing, but the doctor never absented himself from his laboratory. This experiment further increased the admiration felt by the Indians for the Russian doctor. Several leading citizens of Bombay allowed themselves to be publicly inoculated and this act of faith opened the way to a wider use of the vaccine in the cities and in the countryside. Between 1899 and 1909 alone, more than eight million people were inoculated. The number of deaths from plague dropped to one fifteenth of what it had been before.

The Indian Government showered Haffkine with honours and he was received with great ceremony by the Royal Medical Society. In August 1899 at the inauguration of the new anti-plague laboratory, the Governor of Bombay declared: "The discovery of this great scientist Haffkine has saved and is still saving countless lives. When the history of our time is written there is no doubt that his name will be given an honoured place."

Vladimir Haffkine died in Switzerland in 1930 at the age of 70. In India his death was an occasion of national mourning. In recognition of all he had accomplished for India the Institute which he had created was renamed the Haffkine Institute in 1925.



VLADIMIR HAFFKINE

The life story of this man so appealed to me that I felt I must write a book about him. To supplement the information I already possessed, I looked up many Russian and foreign periodicals published at the end of the 19th and at the beginning of the 20th century.

I was greatly disappointed. The Russian press had given hardly any space whatever to Haffkine and I was only able to get hold of a small number of foreign publications. Fortunately, however, I was able to contact Dr. Sahib Singh Sockhay, a former director of the Haffkine Institute, while he was visiting the Soviet Union. He offered to send me more documents on the life of this courageous man of science and great friend of India. The present director of the Institute, Dr. D.V. Soman, also answered my appeal. But the fact remains that most of the documentation on Haffkine is still out of my reach in French, Indian and British libraries.

I should be very grateful if you would publish my letter. I hope that among the many European and Asian readers of THE UNESCO COURIER, there are some who could give me some facts about the life, the work and the physical appearance of this distinguished doctor and researcher. My deepest gratitude would go to those willing to assist me in my research.

Mark Alexandrovitch Popovski
Sophievskaia naberejnaia 36 ap. No 22
Moscow, U.S.S.R.

MUSIC OF THE ORIENT

Sir,

I have been getting your magazine for four months and find it most helpful. Your November article on "The Music of the Orient in Reach of Western Ears" by Yehudi Menuhin is very true. Music is worldwide and the Indian melodies very moving and inspiring. Could you have an issue dealing more on this subject.

Clara Morrow
Seattle, Washington, U.S.A.

AS OTHERS SEE US

Sir,

From time to time you devote an issue to a specific question seen in terms of different parts of the world: literature, women's rights etc. I find this very interesting, but I should also like to see from time to time an issue dealing with a country which current world developments have brought into the limelight, as, for example, Egypt, Palestine and Algeria.

Among my friends there is a tendency to consider the people of the United States as a little too materialistic and the peoples of the Orient extremely mystical, leaving us, with our naturally tolerant judgment on ourselves, somewhere between the two. I should be curious to know what Oriental people think of the Americans and how the Americans judge us and the people of the Orient.

Marie-Claire Douxchamps
Namur, Belgium

OCTOGENARIAN GOOD WISHES

Sir,

As a former teacher I find THE UNESCO COURIER of great interest for I see it as the best and most rapid instrument for the progress of mankind. Although I am 85 years of age I receive many visits from former pupils, young men and women, in whom I try to develop an interest for the great civilizing and cultural movement of UNESCO. Best wishes for the complete success of your work of goodwill.

Mme J. Nicolle
Les Ormes-sur-Voulzie, France

CLASSROOM RAW MATERIAL

Sir,

May I take this opportunity to tell you how stimulating and how thought-provoking your magazine is to me as a school teacher. Thank you for making available to me, from all over the world, problems and concerns of people. This is the raw data of curriculum material a teacher must have, to see his little problems in terms of a big World that can be and is, at the center, a friendly World.

John Kneisly
Bethesda, Maryland, U.S.A.

From the Unesco Newsroom...

For reasons beyond our control there has been some delay in the publication of the present issue. Owing to the forthcoming transfer to Unesco's new headquarters of our distribution and dispatch services, the July issue may also reach subscribers later than usual. We ask our readers' indulgence for these delays.

■ **ATOMS-FOR-PEACE PARLEY:** *Some* 2,000 *scientific papers have so far been prepared for presentation to the Second International Atoms-for-Peace Conference which is being organized by the United Nations this year. Invitations to the Conference, which will be held in Geneva from September* 1 *to* 13, *have been sent to* 88 *countries and* 12 *Specialized Agencies of the United Nations.*

CLASSROOM 'MAGIC CARPET': During this year pupils of the Zmichowska school in Warsaw are making regular "classroom visits" to France, Japan, Switzerland, Vietnam and the United Kingdom. They do so during the special lessons devoted to international affairs which the school (like six others in Poland) runs in collaboration with the UNESCO experiment in education for international understanding, in which 170 schools in 40 countries are now taking part. In addition to classroom activities, children collect books, periodicals, pictures and photos, and correspond with "pen friends" in the country of their choice.

■ **TV SCHOOLS FOR ADULTS:** *The possibilities of television for adult education and ways of producing programmes of educational, scientific and cultural value were discussed by television experts and adult education authorities from some* 20 *European countries and from the U.S.A., Canada and Japan, who met recently at Marly-le-Roi, near Paris, at a conference arranged by the French National Commission for* UNESCO *and the French Ministry of Education, with assistance from* UNESCO. *Experts studied the results of experiments in the use of TV for adult education being carried on in various parts of the world, particularly the large-scale programmes in group viewing in such countries as Italy, France and Japan.*

SCHOOL TRAVEL SERVICE: This year has marked the 25th anniversary of the founding of School Travel Service which specializes in school party travel to over 70 centres in all parts of Western Europe. In 1957, over 600 parties totalling nearly 20,000 children and staff, went on STS-arranged trips which included winter sports, art tours and a Rhine cruise, as well as others to the more traditional European capitals and beauty spots. The purpose of this travel is to broaden pupils' minds and to foster international friendship.

■ **REBUILDING A FOREST:** *Schoolchildren of Portland, Oregon, U.S.A., spend a great many hours each year helping to make a forest grow again on the charred slopes of a hill near the city. Each secondary school in the city is responsible for its own forty acres of ground and under the supervision of state foresters, pupils have gradually become expert tree planters. At least ten States in the U.S.A. are nowadays using camps to give children first hand experience with nature's resources.*

NEW UNESCO FILMSTRIPS: Three new filmstrips are now available to help school-teachers, youth group leaders and others to illustrate the aims and work of UNESCO. "Ten Years of UNESCO" is a pictorial history of the Organization's development since its creation in 1946; "Study Abroad" explains the programme which helps individuals and groups to go abroad for study and to get to know other people; "Unesco Fables" explains, for children from three to 12 years of age, UNESCO's aims in very simple terms. The filmstrips can be obtained from National Commissions for UNESCO. Commentaries are available in English, French and Spanish, and other language versions are being prepared locally.

■ **WILDLIFE THREATENED:** *Special measures to protect bears, wolves and eagles from extermination are being taken in Sweden. A recent report states that about* 20 *bears are being killed every year and only about* 270 *remain. Wolverines now number* 126 *compared with* 200 *in* 1942 *and about* 100 *pairs of golden eagles and* 40 *pairs of sea eagles survive. Members of nature protection societies in all Scandinavian countries are co-operating to preserve existing stocks of these species.* (*See* THE UNESCO COURIER, "*Man Against Nature*", *January* 1958.)

UPHEAVAL IN SCHOOLS: The influence of science and technology, the complexity of modern life and an ever-growing student body have created an upheaval in traditional European school systems, a revolution in education which is particularly marked at the secondary school level. This is one of the conclusions from reports of the European Conference on Secondary Education held at Sevres, near Paris, recently under the auspices of the French National Commission for UNESCO and attended by educators from 23 European countries plus Morocco. The background to the meeting was summed up by UNESCO's Director-General, Dr. Luther H. Evans, who stated: "The European secondary school curriculum has been built up over many years. How can educators now expand courses in science and social studies to meet new technological demands in an already full curriculum without overburdening the student? How can they reconcile traditional cultural values with the needs of a society progressively more oriented towards science, technology and economics?"

■ **SOLAR POWER STATION :** *Soviet scientists have designed what is to be the world's largest solar power station. In the Ararat Valley, Armenia,* 1,300 *mirrors, totalling an area of about five acres, will be mounted on special carriages which will move automatically, according to the sun's position, along* 23 *concentric railway lines. They will focus the sun's rays onto a boiler mounted on a* 130*-foot tower. It is estimated that* 2,500,000 *kilowatt hours of electricity will be produced annually by the installation.*

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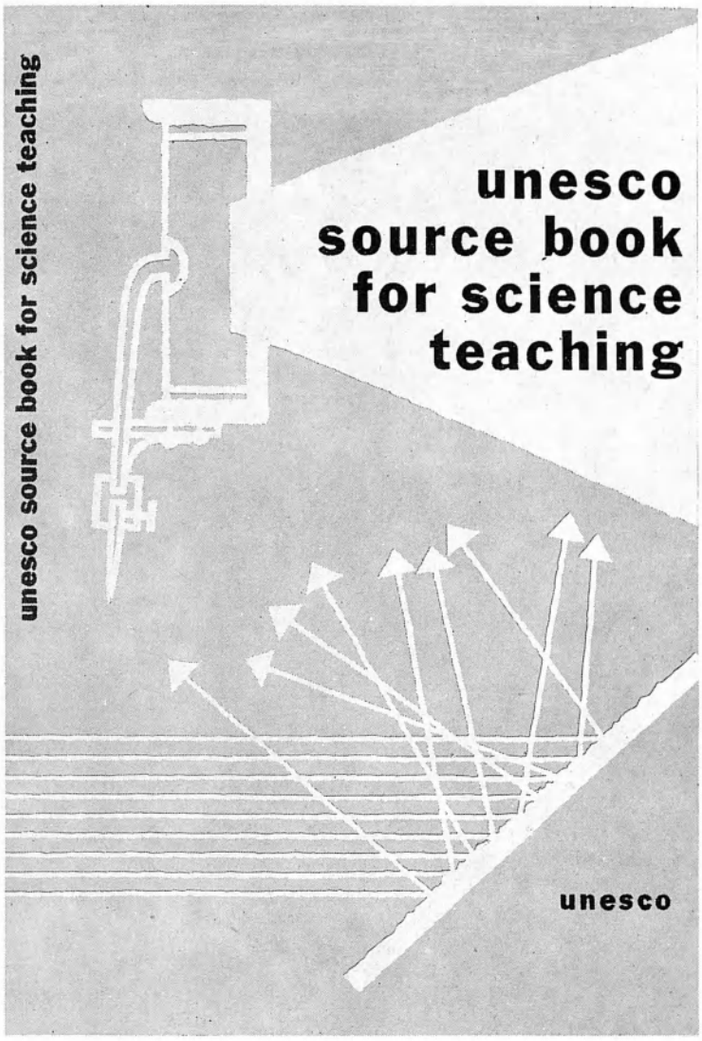

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PEOPLE OF CUZCO, in Peru, former capital of the Incas and perhaps the greatest centre of Hispanic architecture in South America, gather for ceremony marking restoration of their cathedral which was damaged during major earthquake in 1950. (See page 4)

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